CPH 3.1.4

Futurecide – Ghosting the (Human) Future

> The future is a construction that must be predicted with a certain degree of coherence.[1]

Introduction: Can one do justice to the future?

> Qu'importaient les victimes que la machine écrasait en chemin! N'allait-elle pas quand même à l'avenir, insoucieuse du sang répandu? Sans conducteur, au milieu des ténèbres, en bête aveugle et sourde qu'on aurait lachée parmi la mort, elle roulait, elle roulait, chargée de cette chair à canon, de ces soldats, déjà hébétés de fatigue, et ivres, qui chantaient.[2]

Émile Zola's warfront-bound driverless train reflects not only the atavism of his soldier-subjects, drunk on their fate, fatigue and nihilism, but also the machinic-animalistic "engine", its darkness and cruelty, hellbound so to speak, as allegory of modernity – modernity understood as "progressing" on a track towards an inhuman, or maybe posthuman, catastrophe. This was before the cruel twentieth century with its word wars, holocausts and genocides, its nuclear bombs and constant threat of annihilation, its intensified rationalisation and automation process driven by technoscience, neoliberal capitalism and radical biopolitics, and which has led to ambient "future-fear" while the belief in "futurism" has flipped into a widespread "no future" apathy. This, one might say, was until recently "our" postmodern predicament, in which the future always seemed to be caught between the predictable and the unexpected, the possible and the unimaginable – a stalemate.

More cynically, maybe, culture, science and politics nevertheless, in the very absence of futurity, have been involved in endless "constructions" (i.e. anticipations, predictions, extrapolations etc.) of futures and in the hope of controlling future's radical unknowability. It is no co-incidence that science fiction has become such a dominant genre, nor the fact that in technoscientific capitalist conditions science fiction and science fact have become virtually indistinguishable.[3] These constructions of the future are mainly of interest as an object of study of and as reflections of "present" anxieties and desires, projections of identity and otherness. Attempts to anticipate future developments on the basis of past occurrence (i.e. learning from history) or to measure the impact of present action on future scenarios (i.e. "prefiguring" the future, for example through utopian or dystopian extrapolation, science fiction, futurology, nostalgia etc.) say more about the current state of the "human" and its (self)perception than about the (posthuman – if there is such a thing) future-to-come.

How is one to evaluate this seemingly inescapable narcissism and anthropomorphism, its dialectic of apocalyptism and (techno)euphoria, at work in constructions of the future? Is another thinking of the future at all possible? Niklas Luhmann, in his analysis of "temporal structures in modern society"[4] from

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[1] Daniel Innerarity, *The Future and Its Enemies: In Defense of Political Hope*, trans. Sandra Kingery (Stanford: Stanford University Press, 2012), p. 19.

[2] Emile Zola, *La Bête humaine* [1888-9] (Paris: Flammarion, 1972), p. 38.
"The victims the machine crushed on its road mattered little. After all, did it not keep on advancing towards the future, heedless of the bloodshed? Without a driver, surrounded by darkness, like a blind and dumb beast let loose amongst death, it rolled on and on, loaded with this cannon fodder, with these drunk and singing soldiers, already stupefied with tiredness." (Translation SH)

[3] Cf. chapter X on "science faction" in this volume.

[4] Niklas Luhmann, "The Future Cannot Begin: Temporal Structures in Modern Society", *Social Research* 43.1 (1976): 130-152.

a systems theory perspective thought it useful to differentiate between open and closed futures, as well as "present futures" and "future presents" with their associated "futuring" and "defuturing" techniques:

> If we accept this distinction of the present future and future presents, we can define an open future as present future which has room for several mutually exclusive future presents… Whereas the ancients started with generalizations of their everyday world by means of cosmological and theological assumptions and thought not of "the" future but of coming events and the possibility of their privative negation, we experience the future as a generalized horizon of surplus possibilities that have to be reduced as we approach them. We can think of degrees of openness and call *futurization* increasing and *defuturization* decreasing the openness of a present future. Defuturization may lead to the limiting condition where the present future merges with the future presents and only one future is possible.[5]

For Luhmann, the driving force of modern societies and their increasingly differentiating social systems is "complexification", which leads to increased time pressure and the development of techniques of defuturisation to cope and increase controllability and predictability. Since the future "serves as a projection screen for hopes and fears", "the prevailing conception of the present future seems to be a utopian one with an optimistic or a pessimistic overtone", as Luhmann observes.[6] Technology in modern social systems "orient themselves to future presents" and "transform them into a string of anticipated presents" – a defuturising technique to reduce complexity. The problem, however, that arises is that "a future defuturized by technology can be used as a feigned present from which we choose our present present to make it a possible past for future presents".[7] It is this dizzying time-loop that seems to have preoccupied "late" or "postmodernity" out of which posthumanism and the posthuman with their technofutural and technofuturistic imaginaries have emerged. Technology is more than ever seen as the main, or even the only, defuturising mechanism in the face of increasing and increasingly existential risk and "no-future" scenarios. The anticipated "posthuman" condition is the defuturised "feigned" present that is used as (the only) present present thinkable, which serves to sanction the claim that this is what led us to where we are and therefore makes the techno(post)human vision the only possible future present. One might also call this "reverse teleology" in the sense that, given where we are today, "we" were always going to end up with this particular future (and no other).[8] To escape this terminal logic, a *critical* posthumanism, a thought that is aware of the current futurising and defuturising potential of technology needs to assist in opening up new or alternative futurities at a time when stark choices between ecology and technology, between sustainability, degrowth and "care", on the one hand, and a new space age, exoplanet colonisation and human "transcendence", on the other hand seem the only option,[9] a future, in other words, that seems all too threateningly real and eternally elusive – spectral, in one word, as well as a projection screen of techno-utopian ("transhumanist") desires.

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[5] *Ibid*., pp. 140-141.

[6] *Ibid*., pp. 142-143.

[7] *Ibid*., pp. 143-144.

[8] On "reverse teleology" see my *Before Humanity: Posthumanism and Ancestrality* (Leiden: Brill, 2021), pp. 3-4 and *passim*.

[9] An even more drastic way of saying this is that "recursively operating systems orient themselves according to their respectively achieved states" which means that "they align their own operations with their (immediate) past. They do not have access to their future. They therefore move backwards into the future"; Niklas Luhmann, "Zukunft als Risiko", *Soziologie des Risikos* (Berlin: de Gruyter, 1991), p. 43 (my translation).

(De)Constructions of the Future, or, Where is a future when you need one?

> A spectre is always a *revenant.* One cannot control its comings and goings because *it begins by coming back.*[10]

> What of the future? The future can only be for ghosts. And the past.[11]

> I thought you were the ghost. […] Murph, it was me. *I* was your ghost.[12]

"Two specters", Peter Frase writes in his *Four Futures: Visions of the World After Capitalism*, "are haunting Earth in the twenty-first century: the specters of ecological catastrophe and automation".[13] In other words, these two main ghosts or spectres hauntingly represent "two anxieties" that paradoxically produce two "crises" at the same time, one of "scarcity" and one of "abundance".[14] Scarcity of resources and habitable environments, abundance of technological futurity, the rise of the robots and the threat of "automation", a "robotized economy that produces so much, with so little human labor, that there is no longer any need for workers".[15] Which means that behind this dual and double crisis stands another crisis, overshadowingly, namely the one of capitalism itself, as Frase recognizes, "[f]or neither climate change nor automation can be understood as problems… in and of themselves. What is so dangerous, rather, is the way they manifest themselves in an economy dedicated to maximizing profits and growth, and in which money and power are held in the hands of a tiny elite".[16]

We know thanks to "poststructuralist" theory, and deconstruction in particular, which were interested in the figures of the ghost, the phantom, the revenant, and the spectre, not only in the sense of a return of the repressed, or as a "reminder" of the past and its uncanny experience of "déjà vu", but also as a (spectro)political sign of what is "to-come", that ghosting, ultimately, has to do with the future. In its poststructuralist/deconstructive slipstream, theory, especially from the 1990s onwards, has begun to focus on a new, highly political and future-oriented "spectral" figure: the "posthuman", which informs two opposing discourses: transhumanism and posthumanism, both intensely "futurological" (at least at face value). Transhumanism has now become an increasingly influential political ideology that promotes a future in which the "posthuman" takes the form of an alliance with or even a substitution by artificial intelligence of the human. Posthumanism instead sees the "posthuman" as a figure that announces a more ecological and socially just, "postanthropocentric" world picture. Both, however, are involved in what one might call "practices of ghosting (the human)". Understanding what the effects of this ghosting are is now a question of survival (of the species). Therefore, let us return to the ghost and its haunting and re-evaluate, rather than press ahead.

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[10] Jacques Derrida, *Specters of Marx: The State of the Debt, the Work of Mourning, and the New International*, trans. Peggy Kamuf (New York: Routledge, 1994), p. 11.

[11] *Ibid*., p. 37.

[12] Jonathan Nolan and Christopher Nolan, *Interstellar: The Complete Screenplay* (London: Faber & Faber, 2014), p. 4, 150.

[13] Peter Frase, *Four Futures: Visions of the World After Capitalism* (London: Verso, 2016), p. 1.

[14] These two anxieties inform the scenario in Christopher Nolan's film *Interstellar*, which will be discussed in more detail by way of illustration below.

[15] *Ibid*., p. 2.

[16] Frase, *Four Futures*, p. 22. The question this raises for a posthumanist politics and economy, as well as the context of "post-work" (see chapter X on "Posthumanism and Economy").

Revenant –Re-Enter the Ghost

> Chances are, ghosts will make another comeback.[17]
>
> Ghosts remind us that we live in an impossible present – a time of rupture, a world haunted with the threat of extinction.[18]
>
> A programmed future offers no possibility of responsibility.[19]

As the editors of the *Spectralities Reader* point out, it was the publication of Derrida's *Specters of Marx* in 1993 that prompted the "spectral turn" of 1990s.[20] At least since then, we have been aware that ghosts are time travellers – both *revenants* and *arrivants*. As revenants they come back but it is not quite sure from "whence", the past, the future, none of these or indeed both. In so-called "postmodern" times the ghost, epitomised by Hamlet senior, showed that the present, any present, is "hauntological". It is a time "out-of-joint". In other words, the time of the ghost is the time out of joint that is the present which is never fully present to itself. The present is in fact always erased, because always deferred and differing from itself, crossed out by *différance*. At the same time, the haunting nature of the ghost as past is emphasised, i.e. the presence of the past as a tradition that is however not "usable", as T.S. Eliot thought,[21] but which needs to be actively inherited and assumed in the form of a "responsibility" (or response-ability). The only space that is left for futurity thus lies in waiting, preparing for the to-come, a radical openness beyond any horizon of expectation, a messianism without even a ghostly messiah arriving out of nowhere. This logic still holds, of course. In fact it has even gained in importance under contemporary "posthuman conditions", conditions that in fact were already foreseeable, on the horizon, when Derrida wrote *Specters of Marx*.

More and more say that today the future is (necessarily) posthuman, but what exactly do they mean by that, the post- and transhumanists, eco-catastrophists, geo-engineers, extinction studies scholars, revellers of the Anthropocene? They seem to know or at least predict that a future without humans (at least in their current shape, form, being or self-understanding) is inevitable and might not even be so bad, after all. At least for the "planet". They work with projected scenarios based on extrapolations of what "we" currently know, with more or less sophisticated futurological tools that combine empiricism and conceptuality, data sets and algorithms, i.e. a metaphorics that is often deliberately mixing science fiction with science fact.[22] Mostly, this is part of a discourse that is regulated by a strange kind of circularity: technology has brought us here, only technology can get us out of here. Technology is thought to be "originary" (i.e. is what makes us human and is that with which we have been co-evolving). Recently (or indeed for a while, maybe even from the very "beginning"), technology has been making us "posthuman" (which will eventually lead to our self-inflicted obsolescence, and which we can embrace either in a nostalgic-dystopian or a euphoric-utopian fashion). [23] This makes the "figure" of the posthuman and its projected and heavily disputed and conflicting scenarios

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[17] Peter Buse and Andrew Stott, "Introduction: A Future for Haunting", in Buse and Stott, eds., *Ghosts: Deconstruction, Psychoanalysis, History* (Houndmills: Macmillan, 1999), pp. 1-20 (1).

[18] Elaine Gan, Anna Tsing, Heather Swanson, Nils Bubandt, "Introduction: Haunted Landscapes of the Anthropocene", in Anna Tsing et al., eds., Arts of Living on a Damaged Planet: Ghosts and Monsters of the Anthropocene (Minneapolis: University of Minnesota Press, 2017), n.p. (ebook).

[19] David Wood, "On Being Haunted by the Future", *Research in Phenomenology* 36 (2006): 274-298 (277).

[20] María del Pinar Blanco and Esther Peeren, eds., *The Spectralities Reader: Ghosts and Haunting in Contemporary Cultural Theory* (London: Bloomsbury, 2013).

[21] Cf. Thomas Stearns Eliot, "Tradition and the Individual Talent (1919)", in *Selected Prose of T.S. Eliot*, ed. Frank Kermode (London: Faber and Faber, 1987), pp. 37-44.

[22] Hence my use of the phrase "science faction" (cf. Herbrechter, *Posthumanism – A Critical Analysis* (London: Bloomsbury, 2013) and chapter X in this volume.

[23] For a critique see chapter X in this volume.

eminently political. In fact, there is nothing more political by definition than the power struggle over the construction of futures and the ideologies that attempt to concretise and legitimate it.

Others, on the other hand, keep reminding "us" that the future is radically unknowable because it is, strictly speaking, to-come (*à-venir*) – the Derrideans, the Levinasians – a stance which can take religious-theological as well as secular-ethical angles. Nothing is more uncertain than the arrival of a future – the best or the worst-case scenario, or, more likely, none of them, because the future as such is by definition unrepresentable. Anticipating the future, however, is the surest way of stopping it from arriving (which, again, can be good or bad). But how to act, in preparation so to speak, while waiting for an "other" future to happen, or the "Event", living in messianic "hope" (with and/or without messianism)? Especially in times like "ours" – of war, climate change, mass migration, loss of biodiversity, resource depletion and what have you – that seem to demand more and more urgent action in ever growing uncertainty.

It is certainly useful to go through this aporetic experience but this combination of Derridean deconstruction and Levinasian ethics has undoubtedly produced its own ghosts. Today, we seem to be, again, in the middle of a gigantic "politics of the future", in both genitives of this phrase: a political conflict about futures and how to construct them, and a politics-to-come, a politics "from" the future, looking for a futurepolitics (one word).[24] Apparently we "owe" (something) to the future, but how are we supposed to know what the future wants, what exactly we owe, to whom and why? The only thing that is probably safe to say is that the old and more or less comforting (i.e. humanist, religious, ethical) answers to the futural arrivants and their (de)construction no longer wash. But let us not get ahead of ourselves. One step forward, two steps back, let us first retreat and look at what kind of conceptual trouble futurity has run into, and investigate this loss of futures, this "futurecide" and ask: where did the future go?

Futurecide, or « Où est passé l'avenir? »

> Aware of our own imminent end and the end of the world around us, we live and experience the present as a spectre of itself – we live in a time that is defined by the anticipatory knowledge of its own end and that is haunted by the future memory of itself as past.[25]

The current moment thus seems to be characterised by a fundamentally contradictory impression – the accelerated speed of technological development in late technoscientific capitalist, increasingly globalised societies, on the one hand, and the constant feeling of déjà vu, the eternal return of the same in endless variations of fashions and waves of consumption, on the other hand. All of this happens on ubiquitous and global screens with, as a backdrop, wars, global catastrophes, ecocides and extinction threats. Amidst this bizarre breathless paralysis questions like "où est passé l'avenir?" are of the "ordre du jour". "Où est passé l'avenir" – this is how the anthropologist Marc Augé expressed the paradox of the "current ideology of the present". The phrase includes a pun on "passé" which is untranslatable. It means: where did the future *go*? However, "passé" on its own also means "past", or "the past", which creates an obvious asynchronicity (or a series of paradoxes, as Augé writes) with "avenir" in the sense of "past future" or "future past":

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[24] Even Derrideans have become somewhat impatient with the wait for the future *arrivant* it seems:

> The future is an essentially contested zone. It is important to remain open to the incalculable, and the unexpected, but it is at least as important to cultivate the institutions and the civic leadership that will take responsibility for the not so very incalculable future. (Wood, "On Being Haunted by the Future", 282)

[25] Marija Grech, *Spectrality and Survivance: Living the Anthropocene* (Lanham: Roman & Littlefield, 2022), p.3.

> First paradox: history understood as the source of new ideas for the management of human societies supposedly ends at the very moment when it explicitly concerns humanity as a whole. Second paradox: we apparently start to doubt our ability to influence our common destiny at the very moment when science progresses at a constantly accelerating speed. Third paradox: the unprecedented overabundance of our means seems to bar us from thinking finitude, as if political timidity was the price to pay for scientific and technological arrogance.[26]

The condition of the "future of humanity" is thus inscribed within the paradoxical situation that precisely at the time when something like a global human consciousness might develop in reaction to global ecological threats, "we are losing our history", "we are losing our ability to act and change our destiny", "we are losing our grip on technological progress".

Augé goes on to explain the connection between these paradoxes and the process of globalisation:

> We live in a world where at the extremes the gaps keep widening: the gap between the richest of the rich and the poorest of the poor, the gap between the sum of our knowledge accumulated in the best equipped science labs of the planet, and the state of ignorance in which the majority of the world's population is held, in so-called underdeveloped countries, but also in the industrialized ones.[27]

Against the resulting "ideology of the present, which paralyses the effort to think the present as history because it strives to make obsolete both the lessons of the past and the desire to imagine the future",[28] Augé wishes to liberate the potential of a more radical imaginary based on a desire to wrest away the inevitability from technoscientific "progress" and to envisage constructions of an entirely different future:

> Never before in fact have humans been in a better position to think of themselves as humanity. Probably never before has the idea of a generic humanness been more present in the individual consciousness. But never before also have the tensions due to the unequal distribution of power and wealth and due to the prevalence of totalitarian cultural regimes been stronger.[29]

What Augé elsewhere refers to as a "technological cocooning, which protects us from the past and the future as if only the present existed", is the effect of three phenomena: postmodernism, with its themes of the "end of history" and the "end of grand narratives"; the predominance of spatial over temporal metaphors (cf. globalisation); and the proliferation of mediated images (cf. Baudrillard) with its "cosmotechnologcial" effects.[30]

Despite the hint of paranoia this list displays, there are some important concerns raised here which deserve more attention. One is the legacy of postmodernism regarding the possibility of constructing the future – or the question of the current crisis in the radical imaginary (the future of politics or the politics of the future). The other is the question of technology (before and after Heidegger), related to the increasing "presence" of the (global, new and digital) media. The paradox of a vociferous and breathless futurism of the present moment[31] versus the absence of futurity (as alternative, or radical

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[26] Marc Augé, *Où est passé l'avenir*, Paris : Panama, 2008, pp. 14-15. All translations unless indicated otherwise are mine.

[27] Augé, p. 117.

[28] *Ibid*.

[29] Augé, *Où est passé l'avenir ?*, p. 147.

[30] Marc Augé, "En panne d'avenir", *Le Nouvel Observateur*, hors série 59, July/August 2005, p. 10.

[31] Paul Virilio, *Le futurisme de l'instant – Stop-Eject* (Paris: Galilée, 2009).

imaginary)[32] is probably an accurate description of our "posthumanist" times – times of great promises and "future hypes",[33] as well as great threats and "ecocides" or extinction.[34]

So who is to blame? Augé's starting point is quite representative in this respect: at an intellectual level, usually the main culprit is postmodernism. Postmodernism, as the time that lost the future, the anti-utopian moment, resisting the idea of future as progress, problematising the very representation of the future, emphasising contingency and particularity, etc.[35] However, as Jeffrey T. Nealon rightly cautioned, the current moment, far from being the "end" of postmodernism, could also, or maybe even should rather, be understood as "an intensification and mutation within postmodernism".[36] Nealon, following Fredric Jameson's original definition of postmodernism as the logic of late capitalism, sees the development at work in post-postmodernism mainly as the effect of an intensification within neoliberal capitalism. But maybe there is no need for an opposition between the idea of a drifting away from postmodernism and the process of evaluating and managing its legacies (and also its futures) and a renewed need for a reengagement with the idea of the postmodern, especially since the economic base has transformed itself into what Gilles Lipovetsky calls "hypermodernity" with its "multiplied divergent temporalities". "To the deregulations of neocapitalism there corresponds an immense deregulation and individualization of time", as Lipovetsky argued.[37] "The politics of a radiant future have been replaced by consumption as the promise of a euphoric present" and have led to a "gadgetization of an aimless and meaningless life"[38], which still holds true twenty years later. Presentism and acceleration, ephemerality and insecurity have been the result. It would be important, however, one might argue, *not* to identify postmodernism (as Lipovetsky and so many other detractors of postmodernism have done) with its usual travesty of "coolness" and "anything goes", in order to understand what the serious philosophical challenges posed by the postmodern were and continue to be. If anything, in "hypermodern" (or maybe, increasingly also, "posthumanist") times, the postmodernist emphasis on the ambiguity of its prefix has become *more* relevant and urgent. Lipovetsky, again, is representative in his desire to shift the idea of a postmodernist "crisis of the future" towards the notion of a "hypermodern future":

> While the mythology of continual and inevitable progress has become obsolete, we have nevertheless not ceased to expect and believe in the "miracles of science": the idea of an improvement in the human condition by the applications of scientific knowledge is still meaningful. It is just that the relation to progress has become uncertain and ambivalent… The power of the future has not been destroyed: it is simply no longer ideological and political, but borne by the dynamic of technology and science.[39]

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[32] Cf. Franco "Bifo" Berardi, *After the Future* (Edinburgh: AK Press, 2011).

[33] Bob Seidensticker, *Futurehype: The Myths of Technology Change* (San Francisco: Berrett-Koehler, 2006).

[34] Claire Colebrook, "Introduction: Framing the End of the Species", *Extinction, Living Books about Life*: https://www.livingbooksaboutlife.org/books/Extinction, accessed 27 May 2025.

[35] On the notion of postmodernism's temporality as that of the "future perfect" or the "future antérieur" see Adrew J. McKenna, "Postmodernism: It`s Future Perfect", in Hugh Silverman and Donn Welton, eds., Postmodernism and Continental Philosophy (New York: SUNY, 1988), pp. 228-242, and Tom Myers, "Modernity, Postmodernity, and the Future Perfect", *New Literary History* 32.1 (2001): 33-45.

[36] Jeffrey T. Nealon, *Post-Postmodernism, Or, The Cultural Logic of Just-in-Time Capitalism* (Stanford: Stanford University Press, 2012), p. Ix.

[37] Gilles Lipovetsky (with Sébastien Charles), *Hypermodern Times*, trans. Andrew Brown, Cambridge: Polity, 2005, p. 35.

[38] Lipovetsky, p. 37

[39] *Ibid*., pp. 42-43.

However, it is precisely this supposedly "postideological" technological determinism Lipovetsky revaluates as "neo-futurism",[40] which should be, from a post-postmodernist, and also a *critically* posthumanist point of view, highly suspicious. There was an undeniably refreshing but also worryingly naïve liberalism at work in Lipovetsky's notion that within hypermodernity lies the chance for "a *pure future*, one that needs to be constructed without any guarantees, without any preordained path, or any implacable law of change".[41]

Therefore, constructing futures "we" must: this much technological, scientific but also cultural change demands of "us". So we are in a time that is looking for a future "after" the post, but which, nevertheless, needs to bear the ambiguity of any post, or positioning 'after', in mind. Thus, where is a future when you need one?

The Future Is Back – Back to the Future

> The future can only be anticipated in the form of an absolute danger. It is that which breaks absolutely with constituted normality and can only be proclaimed, *presented*, as a sort of monstrosity.[42]

In writing a new preface for the future one is always belated. David Wood, for example, ended his own preface "Editing the Future" to the collection *Writing the Future*, 1990, by saying: "If the secret of postmodernism lies in rethinking its *post*- within a non-progressivist, non-*modern*, frame, it is time and the future that continue to require our urgent attention".[43] Many essays in this still very important and representative collection, as far as the nexus between postmodernism, a deconstructive notion of writing and the futurity of the future is concerned, begin with the classic distinction between the "non-modern" future, or the future proper (*avenir*, or the pure and simple and unknowable alterity of the "to-come") and the "modern" or humanist projected future, as that which has always already been contained in the past, awaiting its materialisation in the form of an extrapolation process. It is of course not as if this distinction has disappeared (again) or as if it might ever be able to disappear, or, even worse, be "overcome". However, the ambient exasperation with the postmodern lay precisely in the perceived paralysis of the waiting process, the resistance to anticipation, the respect for the temporal alterity of the future,[44] at a time when humanity cannot wait: an endless series of time-consuming pressures are beleaguering "us", from all forms of technology-induced apocalypse (nuclear to biogenetics) to manifold ecological extinction scenarios. So much so, that Bill Joy's half panicking half

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[40] *Ibid*., p. 44.

[41] *Ibid*., p. 42.

[42] Jacques Derrida, *Of Grammatology* [1967], trans. Gayatri Chakravorty Spivak (Baltimore: Johns Hopkins University Press), p. 5.

[43] David Wood, "Introduction: Editing the Future", *Writing the Future*, ed. David Wood (London: Routledge, 1990), p. 9.

[44] The programmatic and symptomatic example is Derrida's statement in *Of Grammatology* (cf. the epigraph above) that: "The future can only be anticipated in the form of an absolute danger. It is that which breaks absolutely with constituted normality and can only be proclaimed, *presented*, as a sort of monstrosity. For that future world and for that within it which will have put into question the values of sign, and writing, for that which guides our future anterior, there is as yet no exergue" (Jacques Derrida, *Of Grammatology*, trans. G.C. Spivak, Baltimore: Johns Hopkins University Press, 1997 [1967], p. 5). The future is an "invention of the other" (cf. Derrida, "Psyche: The Invention of the Other", trans. Catherine Porter, in *Reading de Man Reading*, eds. Lindsay Waters and Wlad Godzich, Minneapolis: University of Minnesota Press, 1989, pp. 25-65.), which leads Derrida to reject the postmodern, and every "post-" in fact, in favour of a radical futurity understood as a "monstrous monstrosity" (cf. Derrida, "Some Statements and Truisms about Neo-logisms, Newisms, Postisms, Parasitisms, and Other Small Seismisms", *The States of 'Theory': History, Art, and Critical Discourse*, ed. David Carroll, Stanford: Stanford University Press,1990, pp. 63-94).

"joyful" exclamation "Why the Future Doesn't Need Us" now merely sounds like the referee blowing their whistle to resume play after half-time.[45]

When "our most powerful 21st-century technologies – robotics, genetic engineering, and nanotech – are threatening to make humans an endangered species",[46] accidents are waiting to happen. Which is why theory seems to have since shifted its attention on to the accidental and the "plasticity" of the future. Waiting to happen is one possible, if incomplete, translation of the French "*voir venir*", which Jacques Derrida in his preface to Catherine Malabou's *The Future of Hegel: Plasticity, Temporality and Dialectic* took as an encapsulation of the timeliness of Malabou's project on futurity, plasticity and Hegel:

> "To see (what is) coming" means *at the same time* to anticipate and let oneself be surprised, to bear *and, at the same time*, I mean precisely *at the same time, not to* bear the unexpected. In other words, the surprise *in* what is coming, the event *of* what is coming: the future.[47]

If, today, the future does not need us it is because we can see (it) coming, namely the future "without" us. The current understanding of futurity – between the accident and the plasticity of speculation – plays itself out in the final stages of Hegelian (i.e. modern, humanist) subjectivity:

> What must be thought here is the very subjectivity of the subject and what happens to the subject, that is, the experience which exposes the subject to what comes to it, to what happens to it, to what it "sees coming", in the double sense of what can be anticipated and what remains impossible to anticipate. And what happens to the subject who "sees coming" will be for it as essential as accidental, as essential as the necessity of its *telos*, as accidental as an unanticipated accident.[48]

Voir venir – giving oneself to receive – positioning oneself both before and after the accidental, anticipating the monstrosity of the future – is the very process of plasticity, as Derrida explains. At the time of possible "extinction" – let us call this posthumanism in its most radical sense – the future is no longer foreseeable, maximum plasticity is no longer enough, the future without us is no future any more – it is no longer the unimaginable for any *voir venir*, the "excess of the future over the future" as plasticity, as Catherine Malabou explains.[49]

The above should make it quite clear that there is not so much a break with postmodernist thinking about the future, or a return to or of the future, at work in contemporary thinking but rather a strange continuity, if in the form of a raising of the stakes, or an acknowledgment of the "plasticity" of the future of the future. In other words, one could speak of a "remediation" or a "(re)translation" of futurity. In fact, to simplify grossly, if postmodernism with its critique of modern notions of futurity translated into the idea of asynchronicity – a proliferation of alternative histories and a "rewriting of modernity"[50] – the current moment, for which the term "posthumanism" seems to have increasingly been finding acceptance,[51] could be said to reveal the plurality (or plasticity) of the future. The connection between postmodernism and posthumanism, between past and future, to follow a famous

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[45] Bill Joy "Why the Future Doesn't Need Us (2000)", in Glenn Yeffeth, ed., *Taking the Red Pill: Science, Philosophy and Religion in* The Matrix (Chichester: Summersdale, 2003), pp. 235-275

[46] Joy, p. 235.

[47] Jacques Derrida, "A Time for Farewells: Heidegger (Read by) Hegel (Read by) Malabou", in Catherine Malabou, *The Future of Hegel: Plasticity, Temporality and Dialectic*, trans. Lisabeth During, London: Routledge, 2005, p. ix.

[48] *Ibid*., p. xi.

[49] Malabou, *The Future of Hegel*, p. 6.

[50] Jean-François Lyotard, "Rewriting Modernity", *The Inhuman: Reflections on Time*, trans. Geffrey Bennington and Rachel Bowlby (Cambridge: Polity, 1991), pp. 24-35.

[51] Cf. Cary Wolfe, *What Is Posthumanism?* (Chicago: University of Chicago Press, 2010).

formulation by Reinhart Koselleck, is that with each future emerges a new past.[52] The search for alternative histories is thus closely tied to the imagining of alternative futures.[53] The critical dimension of both postmodernism and posthumanism lies in the idea that both alternative pasts and other futures (i.e. others than the current ones "we" are "seeing coming") imply the deconstructive practice of "rewriting", or "working through" in order to "let arrive" – which has very little to do with modern and humanist notions of "progress", utopia and even less with dystopia, programming or "futureshock".[54]

Futurities – Le futur a-t-il un avenir? (or, Post vs Transhumanist Futures)

> We face the necessity of contending that anthropogenic and technological futures nonetheless require us to think in universal terms about the place and prospect of humans on the planet.[55]

The future as a separate (and empty, or not-yet-existing) "time-space" (*Zeitraum*) within history and the cultural imaginary is a modern invention.[56] It is closely connected to the legacy of the Enlightenment, colonialism and humanism. This means that thinking about the future is contextually, historically and culturally specific, or, in other words, futures are constructs based on changing notions of futurity. It is closely connected to socially perceived "horizons of expectation" (*Erwartungshorizonte*).

What seems characteristic of the current situation of futurity is a profound ambiguity about the directionality of time, but also an almost neo-futuristic obsession with technoscientific change. In fact, the situation that "late modernity" found itself in, as Peter Sloterdijk, in 1989, described it, namely as in "the time of the epilogue", seems not to have fundamentally changed since. Merely the stakes have risen ever further, namely to ecological extinction levels. The impatience and late modern frustration with the interminability of the "project" of modernity if anything might even have grown. So the question is still not about the end of history, but about what can be done for history so that the future can begin at last. In Peter Sloterdijk's words, late modernity, as the "time of the epilogue" has been struggling with a fundamental aporia:

> On the one hand, modernity can perceive only the worst after itself; on the other hand, the worst lies precisely in its own course, which it prevents itself from leaving, because it holds no alternative to itself as thinkable.[57]

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[52] Cf. Reinhart Koselleck, *Future's Past: On the Semantics of Historical Time* [1979] (New York: Columbia University Press, 2004).

[53] Following Kosselleck's (and other historians) lead history has developed a "futural" dimension in posthuman times, see Zoltán Boldizsár Simon, "History Begins in the Future: Our Historical Sensibility in the Age of Technology", in Stefan Helgesson and Jayne Svenungsson, eds., *The Ethos of History: Time and Responsibility* (New York: Berghahn, 2018), pp. 192-209. See also Simon's *History in Times of Unprecedented Change: A Theory for the 21st Century* (London: Bloomsbury, 2019), as well as Simon and Marek Tamm, "Historical Futures", *History and Theory* 60.1 (2021): 3-22.

[54] Cf. Alvin Toffler's influential *Future Shock* (London: Pan Books, 1979).

[55] Zoltán Boldizár Simon, "Introduction: Historical Understanding Today", in Simon and Lars Deile, eds., *Historical Understanding: Past, Present, and Future* (London: Bloomsbury, 2022), pp. 1-12 (1).

[56] Cf. Lucian Hölscher, *Die Entdeckung der Zukunft*, Frankfurt: Fischer, 1999, p. 9.

[57] Peter Sloterdijk, *Eurotaoismus : Zur Kritik der politischen Kinetik* (Frankfurt : Suhrkamp, 1989), p. 292.

To be postmodern therefore has been the sentiment of living somehow after the end, after surviving the last and living on, before the next apocalypse, or *survivance*.[58] This survival, or in Sloterdijk's terms, mean-time [*Zwischenzeit*], could be described as the time of the event, the birth of (the other) history ("*Die Geburt der Geschichte aus dem Geist des Aufschubs*" — the birth of history from the spirit of deferral[59]). Postmodernism, in fact, has always been concerned with time's alterity, both in history and the future, only that the focus on the "end of history" seems to have slightly shifted, in posthumanist times, namely towards the "end of the future".

Nevertheless, everything that was said about the post in connection with the postmodern, postmodernism and postmodernity applies, in principle, to all postisms, the latest ones, posthuman, posthumanism and posthumanisation, included. Obviously, the notion of "post-human-ism" conveys an even greater sense of urgency of an ending. Which means that in engaging with the posthuman we tend to have even less time for the quite intricate logical and conceptual "side-effects" the posting process brings with it. Instead, there is often exasperation with the postmodern or the impression of being stuck in a time-loop, something we can ill afford in a time when "we" are increasingly overtaken by "events". These events and their eventness – one of the main issues that postmodern theory focused on – are usually associated, on the one hand, with technology (digitalisation, virtualisation, prosthesisation, medicalisation…), and, on the other hand, with extinction scenarios and thus with ecologies.[60] Rosi Braidotti's book on the posthuman captures this moment well and can be seen as representative of it:

> While conservative, religious social forces today often labour to re-inscribe the human within a paradigm of natural law, the concept of the human has exploded under the double pressure of contemporary scientific advances and global economic concerns. After the postmodern, the post-colonial, the post-industrial, the post-communist and even the much contested post-feminist, we seem to have entered the post-human predicament. Far from being the nth version in a sequence of prefixes that may appear both endless and arbitrary, the posthuman condition introduces a qualitative shift in our thinking about what exactly is the basic unit of common reference for our species, our polity and our relationship to the other inhabitants of this planet.[61]

Talk of the posthuman, or the *discourse* one might call posthumanism,[62] is in many ways much "older" than postmodernism and encompasses many of its aspects and falls within the problematic history of humanism (whose ultimate untraceable origin would lie in some moment of "recognition" of the first humans, which would have constituted an awareness of representing a distinct form of being, group or species, and hence the beginning of the idea of a community (of humans) or humanity). But at the same time, of course, posthumanism claims to be postmodernism's successor. In fact, posthumanism is all about succession in the sense that it asks the anxious question: "what comes after the human?" (Whereas postmodernism (or poststructuralism) "merely" asked: "what comes after the subject?").[63]

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[58] See Jacques Derrida, "Survivre" *Parages* (Paris: Galilée, 1989), pp. 117-218. Translated as "Living On — Border Lines", trans. James Hulbert, in Harold Bloom et al., eds, *Deconstruction and Criticism*, (New York: Seabury Press, 1979), pp. 75-176.

[59] Sloterdijk, *Eurotaoismus* 277.

[60] For a good summary of the implications of this argument and its relation to the notion of the "Anthropocene" see Claire Colebrook's "Introduction: Framing the End of the Species", in her edited *Extinction, Living Books about Life*: http://www.livingbooksaboutlife.org/books/Extinction.

[61] Rosi Braidotti, *The Posthuman*, Cambridge: Polity, 2013, pp. 1-2.

[62] Cf. Stefan Herbrechter, *Posthumanism: A Critical Analysis* (London: Bloomsbury, 2013).

[63] Cf. Cadava, ed. *Who Comes after the Subject?*

The "ends of man"[64] – that peculiar endism that folded back onto the idea of teleology and finality is the very thing that still exercises posthumanism, but now much more "literally", rather than mainly "metaphorically", as in Foucault's famous passage towards the end of *Les Mots et les choses*.[65]

What concerns me first and foremost, however, is the idea of the "qualitative shift" that Braidotti evokes in the passage quoted above, the qualitative shift from a "human" to what has been called a "posthuman condition" (cf. Pepperell).[66] It certainly *seems* that there is a future-oriented urgency about the posthuman and its discourse. So it may appear that after almost half a century of epistemological scepticism about the future, its knowabilty, its heterology, its ineffability and radical openness as "to-come", as ethical source of our "responsibility", all of which characterised the "postmodern" attitude, the posthuman condition cannot wait any longer, in the face of the urgencies of our own demise, and that of the planet. It is thus as if "ecology" has become the master-signifier of this supposedly new paradigm. But what does this mean? Is this really a shift towards something else, something new, for example, a shift from "post" to "proto"?

Proto-, or Alternative Futures?

> A "post-post-postmodern" culture suddenly views itself as a proto-global, proto-virtual, proto-biotechnic, proto-synthetic one. Everything that the previous generation perceived under the sign of the "post-", this generation views as "proto-"; not as a completion, but rather as a first draft of new cultural forms.[67]

The problem with a current return to the future (or, neo-futurism, as one might call it) is that some forms of posthumanism are in danger of returning to a much less self-reflexive stage in what might be called the problematic history of "constructions of the future". And in this context I would like to briefly compare and contrast two moves: Mikhail Epstein's characterisation of the present as "proto", in *The Transformative Humanities – A Manifesto*, and Lyotard's "post-postmodern" approach in the various pieces collected in the volume *The Inhuman*. In his chapter, "From post- to proto-: Toward a new prefix in cultural vocabulary", Epstein points towards what he calls the current "transition from finalizing to initiating approaches in the humanities". Epstein's approach more or less deliberately – mainly due to its manifesto style – seems to cut through the ambiguities of the post mentioned above, to promote instead the apparent transparency and dynamic of his suggested successor prefix: "proto". The particular mode of the proto, as Epstein points out, is the "what may be", not the predictive or promissory "what will be".[68] The proto hence describes *possible* futures, not *necessary* ones; it is all about potentiality and becoming, fired by the desire to escape the stagnation of the various "endisms"

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[64] Jean-Luc Nancy and Philippe Lacoue-Labarthe, eds. *Les Fins de l'homme : A partir du travail de Jacques Derrida*, Paris : Galilée, 1981.

[65] Here is Foucault's (in)famous passage in its original (Foucault, *Les Mots et les choses*, Paris: Gallimard, 1966, p. 571-2):

> L'homme est une invention dont l'archéologie de notre pensée montre aisément la date récente. Et peut-être la fin prochaine. Si ces dispositions venaient à disparaître comme elles sont apparues, si par quelque événement dont nous pouvons tout au plus pressentir la possibilité, mais dont nous ne connaissons pour l'instant encore ni la forme ni la promesse, elles basculaient, comme le fit au tournant du XVIIIe siècle le sol de la pensée classique, - alors on peut bien parier que l'homme s'effacerait, comme à la limite de la mer un visage de sable.

[66] Cf. for example Robert Pepperell, *The Posthuman Condition* (Bristol: Intellect, 2003); see also Ollivier Dyens, *La condition inhumaine: essai sur l'effroi technologique* (Paris: Flammarion, 2008).

[67] Mikhail Epstein, *The Transformative Humanities: A Manifesto*, trans. Igor Klyukanov (New York: Bloomsbury, 2012), p. 28.

[68] Epstein, p. 23.

of the era of the posts and the shift in attitude "from retrospectivism to prospectivism".[69] Negativity is thus ascribed to the "post" and positivity and progressiveness to the "proto". Inevitably, the driving force behind the "proteism" is technological and scientific development: the prospect of artificial computer intelligence makes our time "proto-intelligent", the prospect of artificial genetically engineered life makes our time "proto-life", new media and electronic networks characterise our moment as "proto-global" and the emerging collectivity of the networked community invoke our current state as "proto-mind", etc. Epstein, in a somewhat shameless twist, then moves on to appropriate N. Katherine Hayles's notion of the posthuman[70] and aligns it with Hans Moravec's idea of downloading human consciousness into a computer[71] – an idea that Hayles's entire volume, *How We Became Posthuman*, actually sets out to critique. Epstein, however, rebrands the posthuman as "proto-human" – the human as having the potential to become other: "the so-called 'posthuman' does not involve any elimination of the human, but rather the expansion, even the extension of embodied awareness through a system of electronic implants and digital enhancements".[72] This largely revisionist argument in terms of materialism and embodiment leads to a rather cynical emphasis on "the humanistic potential of new technologies".[73]

This shift in perspective is in fact what seems to justify the liberating and almost triumphalist experience and tone in Epstein's account. As Epstein explains, the proto- is different from the idea of the pre-, as for example in prehistory. In fact, the idea of proto- is in fact not so different from Lyotard's notion of rewriting (cf. "rewriting modernity"), which he preferred to the "deplorable" transformative use of the postmodern, as an attempt to unhinge the modern dialectic between a pre- and a post-, or predetermination and postdetermination, and, instead argued for a Freudian *Durcharbeitung* or a Heideggerian *Verwindung*:

> The "re-" in no way signifies a return to the beginning but rather what Freud called "working through", *Durcharbeitung*, i.e. a working attached to a thought of what is constitutively hidden from us in the event and the meaning of the event, hidden not merely by past prejudice, but also by those dimensions of the future marked by the pro-ject, the programmed, pro-spectives, and even by the pro-position and the pro-posal to psychoanalyze.[74]

The "project" of "rewriting humanity" form the point of view of the inhuman here becomes thinkable and would be the underpinning logic of any *critical* posthumanism. In terms of the proto-informational as described by Epstein, for example, Lyotard's question raised at the end of "Rewriting Modernity" resonates even more powerfully today than at the beginning of the so-called "information age":

> It being admitted that working through is above all the business of free imagination and that it demands the deployment of time between "not yet", "no longer" and "now", what can the use of the new technologies preserve or conserve of that?[75]

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[69] *Ibid*., p. 25.

[70] N. Katherine Hayles, *How We Became Posthuman: Virtual Bodies in Cybernetics, Literature, and Informatics* (Chicago: University of Chicago Press, 1999).

[71] Hans Moravec, *Mind Children: The Future of Robot and Human Intelligence* (Cambridge: Harvard University Press, 1990).

[72] Epstein, p. 27.

[73] *Ibid*.

[74] Lyotard, "Rewriting Modernity", p. 26.

[75] *Ibid*., p. 35.

There, is in fact, a section, towards the end of Epstein's chapter on the shift from post to proto where the proto is itself problematised and contextualised and where the idea of its implication in the "construction of the future" is directly addressed:

> Proteism … already possesses sufficient historical experience in order to claim its place not in the distant future, but in the distant past of the future that it anticipates. It positions itself not as an avant-garde, but as an arrière-garde of those trends that will soon turn it into an archeological layer of our rapidly changing society.[76]

And, in the end, the temporal logic of the proto becomes indeed thoroughly implicated within the temporal logic of the post as outlined above:

> In the twenty-first century, the pace of innovations has accelerated to such an extent that our generation can already foresee its own decline in a future that views us at its distant past. This double, forward-and-back vision is our distinctive feature. Proteism sees itself as if it were looking through the other end of binoculars; as a result, the contemporary world appears small and recedes into the historical past.[77]

Epstein even in the end refers to a certain "humility" of proteism ("a propensity towards litotes, or understatements").[78]

The crux, however, comes in the final section called "the paradoxes of the 'proto-'". This is, in fact, almost identical to Lyotard's reference to the *husteron proteron* logic of hindsight in "Rewriting Modernity":[79] "it is possible to judge anything as 'proto-' only once its mature stage and completion have already been reached".[80] What exactly is it, then, one might ask, that Epstein adds to the idea of the post when he describes the "projected belatedness" of the proto in these terms:

> The uniqueness of our contemporary situation is that we can define something as "proto-" in advance, not with hindsight, but rather with foresight … By forecasting the future, we position ourselves in its distant past. Thus, futurology becomes inseparable from the projective archaeology of our own time.[81]

Or, again, from which position does he articulate the following:

> Culturally, we rejuvenate at the same time as we grow old. We are super-modern and super-ancient; we are neo-archaics. The rapid renewal that we project for the future determines the speed of our own recession into the past.[82]

It seems that, the post- here might have given birth to something paradoxically "new", after all – let's say the future that postmodernism forbade itself from having (disavowal) and which it so much desired as a "to-come". This also shifts the idea of prolepsis, encapsulated in the tense of the future anterior, which projects a pastness into the future (this will have happened) and relocates it within the past itself.

One could also speak of a "future posterior" at work in Epstein's logic of the arrière-garde or the neo-archaic. It is important, however, at the same time to resist the technological determinism that is put

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[76] Epstein, p. 40.
[77] *Ibid*.
[78] *Ibid*.
[79] Lyotard, "Rewriting Modernity", pp. 24-25.
[80] Epstein, p. 41.
[81] *Ibid*.
[82] *Ibid*.

forward as the reason and driving force behind the perceived "acceleration" of this shift – a shift, which Paul Virilio, in his typically hyperbolic and alarmist fashion described as "*intemporanéité*", in "Le futurisme de l'instant", in 2009. Virilio seems to be referring to the same "anachronic acceleration of the present reality"[83] that underlies Epstein's proteism, and which Virilio sees as "the sign of the approaching extinction, not of the human species, but rather of the CHRONO-DIVERSITY of tangible life".[84] It seems thus that the current moment within the history of the "construction of the future" condemns an absent "humanity" to perform the task of thinking by addressing what lies between the accident and plasticity.

In the end, in reevaluating the postmodern critique of the "construction of the future" in the face of the impatience of the posthuman, critical posthumanism's task – "rewriting humanity" – is to be aware of the complex temporalities opened up by the "time of the posts" and remember that we haven't quite finished with the human yet, and that we're not really ready to "move on". So, once again, it is quite ironic that in the time of the greatest need for an alternative future, a radical imaginary becomes less and less available, and our lives become more and more "cluttered" with technologies:

> When the spatial and temporal location of an event merely designates an accidental demarcation which no longer bears any essential meaning for its current effect, as for example with computer storage …; when today or in the near future entire lives will take place in the virtual worlds of media; when living beings might be duplicated through genetic engineering or when they might be manipulated to such an extent that they will no longer be exposed to singular destinies, but rather follow prepared careers, then talk of their future will obviously lose its current meaning. Because in such cases there will only be a mediated, technically produced future, which will no longer form a universal horizon usable for the attribution and interpretation of the meaning of such processes.[85]

And in losing this social ability to construct believable and universalisable horizons of expectation, between pasts and futures, we are in danger of losing our ability, precisely, for *Zukunftsgestaltung*, the construction of the future because "representations of the future [*Zukunftsvorstellungen*] structure the horizon of expectation of a society".[86] There is thus a common interest amongst historians and theorists of the future in the narrative constructions of futures and futurity needed to perform a "re-politicisation" of the future.[87]

One might therefore conclude that we somehow need both, postmodernism and posthumanism, to achieve this. Postmodernism, in rewriting modernity, in working through modernity, reconnects late with early modernity and thus opens up possibilities for alternatives, i.e. other modernities, or maybe non-modernities. Posthumanism, amongst other things, returns us to a time when "we" were not "human", it reconnects our late humanity (in all meanings of the word "late" – coming late, belated but maybe also already too late, after) with something like "before" or "early" humanity; and it thus raises the question of the nonhuman, the pre-human, but also, literally, the posthuman, in the form of human legacies, alternatives and ecologies.[88] The question of sustainability in the face of extinction (human and nonhuman) has turned into the ultimate challenge of "our" time. Thinking the unthinkable

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[83] Paul Virilio, *Le Futurisme de l'instant: Stop-Eject* (Paris: Galilée, 2009), p. 69.

[84] *Ibid*., p. 95.

[85] Hölscher, *Die Entdeckung der Zukunft*, 229.

[86] *Ibid*., p. 26.

[87] Cf. Johannes Rohbeck, *Zukunft der Geschichte: Geschichtsphilosophie und Zukunftsethik* (Berlin: Akademie, 2013).

[88] This is precisely my take in *Before Humanity: Posthumanism and Ancestrality* (Leiden: Brill, 2021).

of one's time has always been, according to Heidegger, the very "task of thinking".[89] In our case (as to a great extent already for Heidegger) the unthinkable has something to do with humans (and nonhumans, and the "environment"), technology (or media) and futurity (or historicity), or, in one word: ecology.

Perdre la mesure *… or, the ecologics of extinction*

> Cooper: 'Mankind was born on Earth. It was never meant to die here'.[90]

The poet and philosopher Michel Déguy in his 2012 treatise on the future of ecological thinking, *Ecologiques*, asked whether "the currently dominating techno-scientific treatment of the 'human condition' [is] irreversible" and whether ecology in its current form might be "failing the world":[91]

> [T]he management of all flows: *eu*genics, *eu*biosis (bare life), *eu*thanasia, *eu*doxia, *eu*trapelia-welfare, *eu*phemia etc. – have already deterrestrialised the human … to the point where an exit or mutation has already taken place: the exit from all vernacular modes of millenary existence…; which could be summarised as an exit from the "logos" and all –logies, so that ecology itself would be protesting and rebelling "too late", when its etymology is already being forgotten, "logic of the *oîkos*"; more succinctly: it would lose *its own measure* [my italics, SH] in terms of environment, the technological change of technics which improves the environs of every "*Umwelt*"…[92]

Déguy's notion that ecology or any eco-logic seems to come too late at the present time – a time which he characterises as *eu*-topian, in the sense that the human has "outgrown" its environment with the help of technology. Déguy's pessimistic conclusion is, taking its cue from Heidegger's famous quotation of Hölderlin, that "man no longer 'poetically' dwells on Earth", which means that "[t]he future of the illusion and the illusion of the future now form a loop". The main question, however, is: "Can we get out of it?"[93]

This dilemma – between a "belated" ecology and the absence of "futurity" – also structures the already mentioned science fiction film *Interstellar*. As the director, Jonathan Nolan, in an interview explains:

> We're sort of in this moment in which humans are obsessed that we'll prove our own undoing – that we'll poison the planet, we'll destroy ourselves, and all these things. But I thought it would be more interesting to find a slightly less personal Armageddon, or the idea that the universe obliterates you or the planet turns itself toxic because it doesn't care about you and me because we're an accident in outer space. The blight and the dust provided what I thought was a great impersonal way for the planet to sort of gently suggest that our time here was over. That it was the moment to move on, rather than being something that we had brought on ourselves which, in its own way, feels anthropocentric.[94]

However, while this might sound like a thoroughly "posthumanist" scenario with its potential to take the very fashionable notion of postanthropocentrism in contemporary thought and culture seriously,

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[89] Cf. Martin Heidegger, "What Calls for Thinking", *Basic Writings*, ed. David Farrell Krell (London: Routledge & Kegan Paul, 1978), pp. 365-89.

[90] Nolan, *Interstellar*, p. 37.

[91] Michel Déguy, *Ecologiques* (Paris: Hermann, 2012), p. 21.

[92] *Ibid*. All translations unless indicated otherwise are mine.

[93] *Ibid*., p. 22.

[94] In Jonathan Nolan and Christopher Nolan, *Interstellar*, Screenplay (New York: Opus, 2014), p. ix.

the film in its motivation and ultimate resolution remains profoundly humanist precisely *because* of the futurity loop that Déguy refers to above. This illusion of a future and the future of an illusion loop is nothing but a rearticulation of the very "postmodern" and psychoanalytic logic of trauma that underpins both the science fictional idea of time travel (both into the future *and* into the past) and the metaphysics of "future generations", as articulated by Slavoj Žižek as the basic "paradox" of retrospection:

> This, therefore, is the basic paradox we are aiming at: the subject is confronted with a scene from the past that he wants to change, to meddle with, to intervene in; he takes a journey into the past [or future], intervenes in the scene, and it is not that he "cannot change anything" — quite the contrary, only through his intervention does the scene from the past become what it always was: his intervention was from the beginning comprised, included. The initial "illusion" of the subject consists in simply forgetting to include in the scene his own act ...[95]

Nolan readily subscribes to this curious generational logic by saying that,

> in the interim I had a little girl of my own … But even in the few months since I've become a parent, you begin to realize that, as you get older, you become a bit of a passenger in the universe. And I imagine I will probably get to a moment in my life shortly towards the end of it where you just want to keep living because you want to see what happens … that you'd be able to glimpse that on some level, that you'd be able to glimpse where all that is going, is very sad and very alluring all at once.[96]

To "live on" just to "see what happens" is also what inspires the heroics of the prototypical astronaut, Cooper, in the film. As his mission to discover a habitable exoplanet for a dying humanity on a desertified Earth literally runs out of time and fuel, Cooper plunges into a black hole to explore the mysteries of time and gravity. The vision he has is that of a "tesseract" (a five-dimensional structure that transcends time and space) and which functions to overcome the "generation game". Through the tesseract, a "medium" created by future humans, Cooper is able to talk back to his daughter, Murph, from the "future" and help her solve the ecological problems humanity has been facing since he left her behind. Through this trans-gravitational time loop he is thus "enabling" the future from which he is communicating back to "happen" in the first place:

> Cooper: "They" aren't "beings"… they're us … trying to help … just like I tried to help Murph…
>
> Tars: People didn't build this tesseract –
>
> Cooper: Not yet … but one day. Not you and me but people, people who've evolved beyond the four dimensions we know…[97]

What constitutes the "conduit" for this intergenerational yearning for communication between parents and children, or present and future generations, is – and that is where the film returns to an essential humanism – love:

> Dr. Brand: I tell you that love isn't something we invented – it's observable, powerful. Why shouldn't it mean something?
>
> Cooper: It means social utility – child rearing, social bonding –

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[95] Slavoj Žižek, *The Sublime Object of Ideology* (London: Verso, 1989), p. 57-58.

[96] Christopher Nolan, in Nolan and Nolan, *Interstellar*, p. xvi.

[97] Nolan and Nolan, *Interstellar*, Screenplay, pp. 144-145.

> Brand: We love people who've died … where's the social utility in that? Maybe it means more – something we can't understand, yet. Maybe it's some evidence, some artefact of higher dimensions that we can't consciously perceive…. Love is the one thing we're capable of perceiving that transcends dimensions of time and space. Maybe we should trust that, even if we can't yet understand it.[98]

Loving "dead" people – believing that their disappearance is never final, that they might come back (i.e. to haunt) is what both powers and upsets the generational order of succession. Cooper, the lone parent, who is raising his kids together with their grandfather on a corn farm, teaches Murph about technology and science. When he is called up for a space mission he is aware that, due to relativity, his family will have aged much more than himself (it turns out that the time difference is almost Murph's entire life span). When Cooper is finally rescued and brought to the space station that his daughter created to save humanity with the knowledge about gravity that Cooper transmitted to her 'from the future' through the tesseract, he experiences the ghostliness created by this generational upset:

> Murph: … but I knew you'd come back.… Because my dad promised me…. No parent should have to watch their child die. My kids are here for me now. Go.
>
> (…)
>
> *He watches [Murph's kids and grandkids], their love, as if from another dimension. A man out of time. A ghost.*[99]

But he also anticipates this and exposes the spectral co-existence of generations even under "normal" (i.e. humanist) circumstances where parents are merely "ghosts of their children's future":

> Cooper to Murph: [your mother said] "I look at the babies and I see myself as they'll remember me … It's as if we don't exist anymore, like we're ghosts, like now we're just there to be memories of our kids". Now I realize – once we're parents, we're just the ghosts of our children's futures … Murph, a father looks in his child's eyes and thinks – maybe it's them … maybe my child will save the world. And everyone, once a child, wants to look into their own dad's eyes and know he saw how they saved some little corner of their world. But, usually, by then, the father's gone.[100]

Cooper in the fashion of a true explorer and saviour thus needs to disappear, needs to get out of this world, and take to the skies to save humanity and create a future "without" him.

Getting out of *this* world is again the subject of current science fiction and it also informs the return of science's dream of travelling to the stars to find a new "home", a new "world", for "us". As Déguy remarks: "The cloned world where life will be better and where 'real life' will at last exist is live on your screens".[101] What Déguy refers to as "ecologics", however, involves a "rethinking of the imagination in its inventive relation to the world".[102] In the face of a global refugee and migrant crisis, for example, one may ask, following Déguy, whether there is in fact "a degenerative auto-immunitary contradiction

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[98] *Ibid*., p. 84. On the issue of (parental) love see Lance Belluomini and George A. Dunn, "Love, Value and the Human Destiny in *Interstellar*", in Jason T. Eberl and George A. Dunn, eds., *The Philosophy of Christopher Nolan* (Lanham: Lexington Books, 2017), pp. 47-60.

[99] *Ibid*., p. 151.

[100] *Ibid*., pp. 38-39.

[101] Déguy, *Écologiques*, p. 198.

[102] *Ibid*., p. 24.

within ecology"[103] that prevents it from addressing new challenges at a planetary scale and instead forces it to look to the stars:

> Paleoanthropology and common sense teach us that … no people is native [*autochtone*]. There is a time for everything … there was a prehuman time, a human and now a posthuman time. And here we are that every human by necessity, chance, and desire demands the possibility soon to be inscribed by law, to be, to be allowed to be, at home anywhere on this planet, and, consequently, nowhere to be refused residence.[104]

In a similar vein, faced with the immeasurability of "our new ecological situation", the mathematician Olivier Rey asks: "Comment perdre la mesure …" (how to lose measure).[105] Starting from the premise that "we no longer live in a cosmos",[106] humanity's situation is that "[f]rom now on we have a planet lost within the immensity and the eternal silence of infinite space".[107] The resulting (ecological) dilemma is that of the "loss of measure":

> Instead of fitting into the world, man tried very hard to appropriate it … On the other hand, one realises that the more this maxim begins to dominate, the more human measure is being lost … Since measure is an adjustment between two terms, when all the legitimation is concentrated in one term, the auto-referential loop turns crazy and measure disappears.[108]

Consequently, "[w]ithout incorporating a scale of pertinence into the definitions of concepts, conceptual thinking obscures the realities it is supposed to illuminate",[109] which means that everything boils down to "*une question de taille*" (a question of size). In a wonderfully ironic vein, Rey asks, if "the future is in our hands! One mystery remains: who is this much-touted 'we', who has been invested with such marvellous power to decide and act?"[110] Far from being empowering, "the view of the Earth from space completes our spatial as well as historical deracination. Rather than engendering a feeling of belonging it produces the opposite, it does not make us think of the Earth as ground, home, history, but shows it to us as a planet amongst others and on which we have been born by accident. It feeds into the dream to escape from this cramped star, the idea that the time might have come for life to continue elsewhere than on this small used ball from which humanity self-ejects by making it inhabitable".[111]

Against the views of an astronaut like Cooper, in a science fiction film like *Interstellar*, who defends the spaceship-lifeboat vision of saving humanity, Rey claims that "there is no point in imagining a solidarity between the billions of individuals that might be comparable to that among the crew of a ship – this would be a typical example of a useless and misleading comparison because it ignores the differences of scale",[112] because "the general degradation will only accentuate the difference between the powerful and the poor – which means that the powerful will be less inclined as ever to give in … the current dynamics seems to be our destiny".[113] So while *Interstellar* and some of the more optimistic ecological scenarios that involve finding a new habitat for humanity on another planet are keen to

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[103] *Ibid*., p. 118.
[104] *Ibid*., pp. 153-154.
[105] Olivier Rey, *Une question de taille* (Paris: Stock, 2014).
[106] *Ibid*., p. 103.
[107] *Ibid*., p. 108.
[108] *Ibid*., p. 123.
[109] *Ibid*., p. 170.
[110] *Ibid*., p. 234.
[111] *Ibid*., p. 235.
[112] *Ibid*.
[113] *Ibid*., p. 236.

construct an interplanetary future, Rey cautions that "the future is dealt with, as much as that is possible, not by a wish to preserve it, but by respecting the right measure for its own sake in the present … The future, if there is one, will be given to us as a bonus [*par surcroît*]".[114] It is this idea of "the right measure" that seems to be at the heart of contemporary ecological thought: how to do justice to several ecologies and ecologics at once, survival *or* extinction of humans – what would be more "ecological"?

The problem that arises out of these two contradictory visions or imperatives is that our contemporary "cosmology" seems to bring with it a fundamental dilemma which in its crudest form might be put as a stark (and impossible) choice – either the planet or us. Biocentrism or anthropocentrism, what to put first? This also becomes clear during the clash Cooper has with Murph's teachers who denounce space travel as an ideological construct and as a waste of resources under the current climate conditions and levels of erosion:

> Murph's Teachers: …right now the world doesn't need more engineers. We didn't run out of planes, or television sets. We ran out of food… The world needs farmers… We're a caretaker generation … [The Apollo missions were] a brilliant piece of propaganda. The Soviets bankrupted themselves pouring resources into rockets and other useless machines … if we don't want a repeat of the wastefulness and excess of the twentieth century, our children need to learn about this planet, not tales of leaving it.[115]

Against this green "meekness" Cooper and the inspiring figure of Professor Brand, who heads NASA (by now an "underground" organisation, or the last "resistance" against the "ecofascism" of the new "agrarians"), doggedly proclaim the need to think "big" in the face of global "blight". For them (and NASA of course), the true ecological choice and the survival of the species lies in the search for exoplanets:

> Cooper: We've forgotten who we are … Explorers, pioneers, not caretakers … We used to look up and wonder at our place in the stars. Now we just look down and worry about our place in the dirt.[116]
>
> (…)
>
> Professor Brand: Earth's atmosphere is 80 percent nitrogen. We don't even breathe nitrogen … Blight does. And as it thrives our air contains less and less oxygen … The last people to starve will be the first to suffocate. Your daughter's generation will be the last to survive on Earth … We're not meant to save the world … we're meant to leave it.[117]

The absurd choice between saving life on this planet *or* humanity is ultimately based on the illusion of measurability. It hinges on the loss of the sense of scale pointed out by Rey, but which was also already perceived by the media philosopher and cultural critic Vilém Flusser in a short essay entitled "Orders of Magnitude and Humanism", in 1990, where he states that: "We are forced to differentiate between orders of magnitude. In this, the human order is one among many. Humanism is inappropriate to the

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[114] *Ibid*., p. 242.

[115] Nolan & Nolan, *Interstellar*, Screenplay, pp. 14-15.

[116] *Ibid*., pp. 118-119.

[117] *Ibid*., pp. 30-31.

present".[118] "In short: man has advanced into the inhuman, the inhuman strikes back at him, and under these blows, humanism breaks down".[119]

In a metaphor that, significantly, runs through many alternative accounts of technology and ecological thinking Flusser compares this hiatus of measures to a "Russian doll" scenario:

> We are somewhere in the interior of a matrjoschka (Russian doll), a hierarchy of orders of magnitude [i.e. scales] in which each contains all smaller ones while being contained by all bigger ones. The transformation of our region from a Mediterranean island into the Russian doll is called – not to put too fine a point on it – the "Copernican revolution" … It is in question what we are actually doing when we jump from doll to doll, from measure to measure, from scale of values to scale of values.[120]

It is the practice of measuring itself – so crucial to any conception of scale – which thus comes under scrutiny and becomes suspicious, especially while jumping "from doll to doll" or from "scale to scale". What Flusser calls "barbarism *by means of* measurement" arises precisely out of comparing or measuring the incomparable: "The dolls not only contain one another; they are also each permeable by the other. It is especially these gray zones between the orders of magnitude that set our teeth on edge [*durch Mark und Bein gehen*] – in case we stay long enough in that doll inside of which we have teeth, marrow, and bone. For we only have marrow and bone in the margin between 10/-5 and 10/5 cm and between decades and seconds, that is, in that order of magnitude which we can perceive with our senses but which we leave more and more often".[121]

Against the nihilistic implications and "anti-humanist" tendencies of the measuring barbarism Flusser proposes a move "from subject to project" under the auspices of a "new humanism":

> The new humanism would have to criticize the gray zones between the orders of magnitude, that is, the zones in which dwell artificial intelligence, artificial life, and artificial immortality … The new humanism cannot want to deny that different orders of measurement overlap each other and interpenetrate. On the contrary, it has to emphasize that, for each order of magnitude, there is a typical epistemology, ethics, and aesthetics that is effective, and that, in spite of the gray zones, abysses gape between the orders of magnitude.[122]

For Flusser – this is probably one of his most famous statements – "the Enlightenment has overshot its mark" and, as a result, "the new humanism is forced to break out of the linearity of technical progress into the winding [*das Gewundene*]".[123] However, while Flusser gambles on a renewed attention to the "priority of the human" that a "new humanism" would help guarantee, based on the "specificity of each order of magnitude" or a context and category-specific sense of scale, which in his view would equal a "Ptolemaic counterrevolution",[124] the anti-humanism of the last decades of the twentieth century has given way to an array of other, much more complex and ambiguous – "posthumanist" – possibilities.

This posthumanist – in the sense of no longer quite anthropocentric – move to take nonhuman scales seriously is for example already present in Jean-François Lyotard's late work, in the 1980s. In a much

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[118] Vilém Flusser, "Orders of Magnitude and Humanism [1990]", *Writings* (Minneapolis: University of Minnesota Press, 2002), pp. 160-64 (160).
[119] *Ibid*., p. 161.
[120] *Ibid*., p. 161.
[121] *Ibid*., p. 162.
[122] *Ibid*., p. 163.
[123] *Ibid*., p. 164.
[124] *Ibid*.

more radical form than *Interstellar*, Lyotard's thinking already comments critically on the fascination with the ecological future of "interstellar" travel. In "A Postmodern Fable", in 1982, he plays with science fictional conventions to tell a "fable" of life's "preparing for exodus" from planet Earth:[125] "What a Human and his/her Brain – or rather the Brain and its Human – would resemble at the moment when they leave the planet forever, before its destruction; that the story does not tell".[126] While the cosmological truth of the fable lies in the fact of the exploding Sun, which provokes the thought that "something ought to escape the conflagration of the system and its ashes",[127] and not yet in the "blight" or climate change scenario of *Interstellar*, it nevertheless captures the shift towards the current posthumanist alliance between ecological and technoscientific thinking in the context of neoliberal globalisation:

> At the time the story was told, all research in progress was directed to this aim, that is, in a big lump: logic, econometrics and monetary theory, information theory, the physics of conductors, astrophysics and astronautics, genetic and dietetic biology and medicine, catastrophe theory, chaos theory, military strategy and ballistics, sports technology, systems theory, linguistics and potential literature [not to forget cinema]. All this research turns out, in fact, to be dedicated, closely or from afar, to testing and remodelling the so-called human body, or to replacing it, in such a way that the brain remains able to function with the aid only of the energy resources available in the cosmos. And so was prepared the final exodus of the negentropic system far from the Earth.[128]

Under these conditions, however, Lyotard's "inhuman", just like Flusser's above, spells out the anxiety that, today, provokes the ubiquity of the posthuman spectre, namely that "everything's dead already". In "Can Thought Go on Without a Body?", in Lyotard's 1987 collection entitled *The Inhuman*, he follows up on the "postmodern fable" scenario with a fictitious dialogue: "He: You [philosophers] explain: it is impossible to think an end, pure and simple, of anything at all, since the end's a limit and to think a limit you have to be on both sides of that limit … But after the sun's death there won't be a thought to know that its death took place … That, in my view, is the sole serious question to face humanity today … everything's dead already if this infinite reserve from which you now draw energy to defer answers, if in short thought as quest, dies out with the sun.[129] Lyotard here unmasks the teleological belief that underlies the ecology of the "exodus" scenario by saying: "The sun, our earth and your thought will have been no more than a spasmodic state of energy, an instant of established order, a smile on the surface of matter in a remote corner of the cosmos. You, the unbelievers, you're really believers: you believe much too much in that smile, in the complicity of things and thought, in the purposefulness of all things!"[130] Under these circumstances "the only job left you is quite clear … the job of simulating conditions of life and thought to make thinking remain materially possible after the change in the condition of matter that's the disaster".[131]

While Lyotard was thinking ecology through cosmology the last two decades have seen a shift back towards planetary immanence so to speak – also visible in the scaling down of US manned exploratory space travel. Instead, the main ecological focus has shifted towards what has come to be called the

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[125] Jean-François Lyotard, "A Postmodern Fable [1982]", *Postmodern Fables* (Minneapolis: University of Minnesota Press, 1997), pp. 83-101.
[126] *Ibid*., p. 83.
[127] *Ibid*., p. 84.
[128] *Ibid*., p. 91.
[129] Jean-François Lyotard, "Can Thought Go on Without a Body? [1987]", *The Inhuman* (Cambridge: Polity Press, 1991), pp. 8-23 (9).
[130] *Ibid*., p. 10.
[131] *Ibid*., p. 12.

"Anthropocene" – centring on the period of humanity's irreversible impact on planet Earth and the prospect of global climate change that arises from that. In their influential "Living in the Anthropocene: Toward a New Global Ethos", in 2011, Paul J. Crutzen and Christian Schwägerl started by claiming that Earth is "a planet that is being anthroposized at high speed", and that "we humans are becoming the dominant force for change on Earth". The major conceptual and ethical change this provokes is that the idea of "nature" in the post-Romantic sense simply no longer applies (and certainly not in opposition to "culture"). One might even venture the formula "nature is us": "we are no longer disturbing natural ecosystems … instead, it's we who decide what nature is and what it will be":

> Rather than representing yet another sign of human hubris, this name [Anthropocene] would stress the enormity of humanity's responsibility as stewards of the Earth … The awareness of living in the Age of Men could inject some desperately needed eco-optimism into our societies.[132]

In a tightrope walk, Crutzen and Schwägerl propose a list of actions that are quite revealing in their ambiguity towards the idea of exoplantary solutions to the ecological crisis. Their suggestions concern the reduction of "hyperconsumption" ("To accommodate the Western lifestyle for 9 billion people, we'd need several more planets" – which would speak for the exploratory and colonising drive that informs the plot of *Interstellar*). Second, however, they take sides with the anti-NASA faction represented by the teachers in the film who argue for investment in science and technology into agriculture rather than space travel: "Global agriculture must become high-tech and organic at the same time". Thirdly, "to prevent conflicts over resources and to progress towards a durable 'bioeconomy' will require a collaborative mission that dwarfs the Apollo program" – a statement that again could be seen as an endorsement of the exoplanet faction. And finally, with clear allusions to Gaia theory (and maybe geo-engineering, or "geo-constructivism"), "we should adapt our culture to sustaining what can be called 'the world organism' … Living up to the Anthropocene means building a culture that grows with Earth's biological wealth instead of depleting it".

The argument between the two ecologics at work here – should we stay or should we go? – are closely connected to the mentioned question of scale. While the idea of the Anthropocene, on the one hand, emphasises the massive impact of humans on everything on the planet, which leads to the temptation to continue and maybe even to extend the reach of anthropocentrism into outer space with the justification that (human) intelligent life is too precious to take any risks on misplaced "meekness" and self-restriction. On the other hand, ever since the first human experienced the view of planet Earth from "outside", the planet, and with it humanity, have been "shrinking", as Charlie Gere implies in his "The Incredible Shrinking Human": "Against the idea of an earth shrunk to a size that we can see as a whole, we should be more realistic about our own actual shrunken status, power, and importance".[133] The truly ethical interpretation, according to this ecologic of the Anthropocene would therefore be "humility", or to think "small":

> The predictions and arguments about climate change are themselves symptoms of a sense of separation from the world of which we are part … against the supposedly shrinking globe which

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[132] Paul J. Crutzen and Christian Schwägerl, "Living in the Anthropocene: Toward a New Global Ethos" (2011), n.p.; available online at: https://e360.yale.edu/features/living_in_the_anthropocene_toward_a_new_global_ethos (accessed 29 May 2025).

[133] Charlie Gere, "The Incredible Shrinking Human", in Paul Crosthwaite, ed., *Criticism, Crisis, and Contemporary Narrative* (London: Routledge, 2011), pp. 46-61 (47).

> we are supposed to manage, it is "man" who should and will shrink to acknowledge "his" own singular monstrosity as a necessary concomitant of there being a future at all.[134]

This contradiction, consequently, is also what underpins the theoretical debate which focuses on what Timothy Clark called "incalculable scale effects".[135] Clark's approach takes its cue from the statement that "dominant modes of literary and cultural criticism are blind to scale effects in ways that now need to be addressed".[136] Given that scale is relative to a prior established position normatively set as zero degree, one to one or "to scale", Clark explains that "the difficulty of conceptualizing a politics of climate change may be precisely that of having to think 'everything at once' [i.e. 'outside' of any normative scale]. The overall force is of an implosion of scales, implicating seemingly trivial or small actions with enormous stakes while intellectual boundaries and lines of demarcation fold in upon each other".[137] Clark's criticism of criticism and its critics is that: "It is as if critics were still writing on a flat and passive earth of indefinite extension, not a round, active one whose furthest distance comes from behind to tap you uncomfortably on the shoulder", which leads him to say that: "Perhaps then the most trenchant environmental and postcolonial criticism in relation to climate change would be one which took up the more meta-critical role of examining assumptions of scale in the individualist rhetoric of liberalism that still pervades a large body of given cultural and literary criticism".[138]

One of the requirements for such an environmentally informed criticism would thus be a heightened attention to "the scale of reading":

> Any broadly mimetic interpretation of a text, mapping it onto different if hopefully illuminating terms, always assumes a physical and temporal scale of some sort. It is a precondition of any such mapping, though almost never explicit in the interpretation. The scale in which one reads a text drastically alters the kinds of significance attached to elements of it, but … it cannot itself give criteria for judgment.[139]

The problem that arises out of the im/possibility of scale (i.e. the necessity and unavailability of the "right" scale in the time of the Anthropocene), ultimately leads to the question of "what on world is the Earth?":[140]

> However, one scale forms a kind of norm for human beings, the usually taken-for-granted-scale of bodily terrestrial existence and perception, its up and down, sense of distances and orientation … The Anthropocene enforces the realisation of the contingency of this normal scale. The scale at which one speaks of oneself as a person-with-a-world may be a constitutively opaque to understanding beyond a now dangerously narrow spatial/temporal window … The phenomenal self-evidence of my singular world is itself a scalar effect unable, so to speak, to see itself as such.[141]

The problem of the "worldness" of the world, from a deconstructive point of view, is that of its irreducible "fictionality". In "The Fiction of the World", part of his final seminar (*The Beast and the*

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[134] *Ibid*., p. 60.

[135] Timothy Clark, "Scale", in Tom Cohen, ed., *Telemorphosis: Theory in the Era of Climate Change*, volume 1 (Open Humanities Press, 2012), pp. 148-66.

[136] *Ibid*., p. 150.

[137] *Ibid*., p. 152.

[138] *Ibid*., pp. 155-156.

[139] *Ibid*., p. 157.

[140] See also chapter X in this volume on "The End of the World".

[141] Timothy Clark, "What on World is the Earth?: The Anthropocene and Fictions of the World", *OLR* 35.1 (2013): 5-24 (9).

Sovereign), Derrida challenges thinking by claiming that: "No one will ever be able to demonstrate, what is called *demonstrate* in all rigor, that two human beings, you and I for example, inhabit the same world, that the world is one and the same thing for both of us".[142] On the other hand, necessarily, thought cannot take place without or "outside" the prior assumption of a "world": "But in a more current sense, and one that does not contradict this one, there really must be a certain *presumed*, *anticipated* unity of the world even in order discursively to sustain within it multiplicity, untranslatable and un-gatherable, the dissemination of possible worlds".[143]

Derrida formulates the "aporetic" structure of the necessity and unavailability of a world thus:

> … nothing is less certain than the world itself, that there is perhaps no longer a world and no doubt there never was one as totality of anything at all, habitable and co-habitable [or uninhabitable for that matter] world and that radical dissemination, i.e. the absence of a common world, the irremediable solitude without salvation of the living being depends first on the absence without recourse of any world, i.e. of any common meaning of the word "world", un sum of any common meaning at all … Yes, don't you agree, it is, it seems to be as if we were behaving as if we were inhabiting the same world and speaking of the same thing and speaking the same language, when in fact we well know – at the point where the phantasm precisely comes up against its limit – that this is not true at all.[144]

In the absence of a "world" the relativity of scale and the necessity to act on a number of scales at the same time thus requires a combination of several "scalar narratives" or, as Joni Adamson calls it – in a vein similar to the postcolonial and environmental criticism called for by Clark above – "nesting", that is "a modulation upwards and downwards, through different scales, much the way Russian babushka or nesting dolls are set one inside the other".[145] As pointed out before, it is no coincidence that Adamson uses the same analogy of the Russian doll as Flusser in describing the "nestling" of different scales and the need for a complex discourse that enables an environmental ethics that does justice to many layers, levels and scales at the same time. Again it is what happens in jumping from scale to scale or doll to doll that constitutes a Lyotardian "différend", or the unavailability of a narrative that would be able to do justice, for example, to the "world" and to "us", *at the same time*.

A similar (eco)logic is at work in Timothy Morton's notion of "hyperobject", as he explains: "hyperobjects … refer to things that are massively distributed in time and space relative to humans … They involve profoundly different temporalities than the human-scale ones we are used to".[146] Following Nancy's deconstruction of the "sense of the world" (cf. the third epigraph to this section), Morton sees hyperobjects as "directly responsible for … *the end of the world*, rendering both denialism and apocalyptic environmentalism obsolete".[147] As a result:

> We are no longer able to think history as exclusively human, for the very reason that we are in the Anthropocene. A strange name indeed, since in this period nonhumans make decisive contact with humans, even the ones busy shoring up differences between humans and the rest … Hyperobjects are what have brought about the end of the world. Clearly, planet Earth has not

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[142] Jacques Derrida, "The Fiction of the World", *OLR* 35.1 (2013): 1-3 (1).
[143] *Ibid*.
[144] *Ibid*., pp. 1-2.
[145] Joni Adamson, "American Literature and Film from a Planetary Perspective", *Transformations* 21.1 (2010): 23-41 (25).
[146] Timothy Morton, *Hyperobjects: Philosophy and Ecology after the End of the World* (Minneapolis: University of Minnesota Press, 2013), p. 1.
[147] *Ibid*., p. 2.

> exploded. But the concept *world* is no longer operational, and hyperobjects are what brought about its demise.[148]

And since, in this sense, the end of the world has come "too early" and the (contemporary, post-Anthropocene) future becomes a time "after the end of the world",

> the strongly held belief that the world is about to end unless we act now is paradoxically one of the most powerful factors that inhabit a full engagement with our ecological coexistence here on Earth … The end of the world has already occurred … the end of the world, brought about by the encroachment of hyperobjects, one of which is assuredly the Earth itself, and its geological cycles demand a *geophilosophy* that doesn't think simply in terms of human events and human significance.[149]

The specific scalar problem that arises through hyperobjects like the "world" is that "they present us with scalar dilemmas in which ontotheological statements about which thing is the most real (ecosystem, world, environment, or conversely, individual) become impossible".[150] The scalar jarring within the ecologics available to contemporary thought – whether of a "deconstructive" or an "object-oriented-ontological" vein – remains the "world's" greatest challenge.

It is this scalar dilemma that Claire Colebrook takes as the starting point of her argument for "an emerging global ethos":

> It is the possibility of extinction or the end of human time that forces us to confront a new sense of the globe: far from being an unfortunate event that accidentally befalls the earth and humanity, the thought of the end of the Anthropocene era is both at the heart of all the motifs of ecological ethics and the one idea that cannot be thought as long as the globe is considered in terms of its traditional and anthropocentric metaphors.[151]

In a move against "globalism (if globalism remains the correct term for the imaginary opportunities presented in the advent of a sense of the limits of the human)", Colebrook declares that "the physical image of the globe … serves as a reaction formation" or an "alibi" that today prevents the articulation of a politics that would begin to escape the dilemma of the "two ecologics" at work in a film like *Interstellar* and which may serve as a "symptom" of the contemporary cultural imaginary and its limitations. As Colebrook states: "the image of the globe, of an interconnected whole, is a lure and an alibi … it is the image of the globe that lies at the center of an anthropocentric imaginary that is intrinsically suicidal".[152] One could therefore say, with Nancy, Gere, Colebrook and many others that the current ecological focus on "planetary" concerns like climate change, (human) extinction, biodiversity and the Anthropocene – like the entire focus on the "nonhuman", maybe – might be part of a process you might call "arguing ourselves out of the picture".[153] Transcendence, in this new "grand" narrative, lies both at the very small and very big end – in belittling the impact, importance and responsibility of humans, on the one hand, and in exaggerating the cosmological stakes in extinction scenarios. A politics of "the right measure" would be located somewhere in between (without being providing a dialectical resolution of the "scalar jarring", however).

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[148] *Ibid*., pp. 5-6.

[149] *Ibid*, p. 7.

[150] *Ibid*., p. 19.

[151] Claire Colebrook, "A Globe of One's Own: In Praise of the Flat Earth", *SubStance* 41.1 (2012): 30-39 (31).

[152] *Ibid*., pp. 37-38.

[153] Cf. Also my "'On not writing ourselves out of the picture…': An Interview with Stefan Herbrechter and the *antae* Editorial Board", antae 1.3 (2014): 131-144; available online at: https://www.um.edu.mt/library/oar/bitstream/123456789/12513/1/1-3-2014.1.pdf (accessed 4 June 2025).

It is in this context that *Interstellar* can be read as a cultural document that addresses this jarring of the two ecologics arising out of the diverse contemporary extinction scenarios. It remains an attempt, however, which ultimately fails to find an appropriate scalar narrative with a convincing resolution. The (rather standard) scalar resolution it does propose – think at a species level rather than focusing on the survival of the individual – is met with stubborn humanist outrage both in the film itself and by liberal Western culture more generally, and rightly so. There is something of the Darwinian *and* the idealist about the slightly mad but also deeply melancholic Professor Brand, when he says in his intergalactic existentialist mode:

> Stepping out into the universe, we must first confront the reality that nothing in our solar system can help us … then we must confront the realities of interstellar travel. We must venture far beyond the reach of our own life spans. We must think not as individuals, but as a species …

He goes on to cite Dylan Thomas's famous villanelle composed "against" his father's (and humanity's) dementia: "Do not go gentle into that good night, Old age should burn and rave at close of day; Rage, rage against the dying of the light …".[154]

That existentialism is a humanism[155] remains also true on a cosmic scale. Brand's disciple (or his spiritual son), with the telling name, Dr Mann, who lures the expedition led by Cooper and Brand's own daughter to the wrong (inhabitable) exoplanet, motivated both by his own survival and the success of the mission (namely implanting a new human colony in space), explains that the Professor despite his inhuman and monstrous lie, is paradoxically the most human of humans, who made the "ultimate sacrifice" by renouncing or giving up his own humanity:

> Brand: Why not tell people? Why keep building that damn station?
>
> Dr Mann: [Your father] knew how much harder it would be for people to come together and save the *species*, instead of themselves … Or their children … Would you have left if you hadn't believed you were trying to save *them*? Evolution has yet to transcend that simple barrier – we can care deeply, selflessly for people we know, but our empathy rarely extends beyond our line of sight.
>
> Brand: But the *lie*. A *monstrous* lie …
>
> Dr Mann: Unforgivable. And he knew it. Your father was prepared to destroy his own humanity to save our species. He made the ultimate sacrifice.[156]

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[154] Nolan & Nolan, *Interstellar*, Screenplay, p. 81. Dylan Thomas's famous villanelle was written in 1951, out of compassion to his suffering and dying father, in a sense of "anticipated grief"; cf. John Goodbody in Dylan Thomas, *The Poems of Dylan Thomas*, ed. John Goodbody (New York: New Directions, 2014), pp. 416-417. See also Patrick Gill's evaluation of Thomas's poem in "The Villanelle", in Gill, ed., An Introduction to Poetic Forms (New York: Routledge2023), pp. 223-231, where he states that "Do not go gentle…" "spins a complex comparison between others who fight hopeless causes with all their might, such as intellectuals [or NASA scientists, like Dr Brand in *Interstellar*; SH], who cannot change the course of events of nature" (p. 225). More generally, it is a poem about heroism; "it never ceases to be about the human condition in general, with its frustrated ambitions and its futile pursuit of such wisdom or action that might counter the prospect of death"; cf. Ronald E. McFarland, The Villanelle: The Evolution of a Poetic Form (Moscow: University of Idaho Press, 1987), p. 89. This is also why it would appeal to both existentialist humanists as well as transhumanists seeking to overcome the "out*rage*" of human mortality. See also Jonathan Edwards's more "personal" interpretation in Edwards "'Do Not Go Gentle into That Good Night': Dylan Thomas and the Art of Dying", available online at: https://englishassociation.ac.uk/wp-content/uploads/2020/08/Edwards2.pdf (accessed 4 June 2025).

[155] Cf. Jean-Paul Sartre, *Existentialism Is a Humanism* [1946] (Harvard: Yale University Press, 2007).

[156] Nolan & Nolan, pp. 95-96.

Cooper is quick to reinsert Mann's (and Brand's) twisted (eco)logic back into liberal humanist (individual) parameters by saying:

> Cooper: No. *That* [sacrifice is] *being made* by the people of Earth who'll die because, in his arrogance, he declared their case hopeless.[157]

Cooper thus forecloses, without resolving, the dilemma between the two ecologics, between human and humanity, present material conditions and futurity, without giving up, however, on the most dangerous and resilient component in the whole metaphysical equation, namely the (humanist, existentialist) yearning that *is* the "dwelling" and which constitutes the "poetics of a world". This is expressed in the final words of the dying Murph who tells her own father to live the future he himself helped to "engender", by joining his love, Dr Brand, so that the story of humanity can begin again:

> Murph: She's out there … Alone in a strange galaxy … By the light of our new sun … In our new home.[158]

In the absence of an appropriate scalar narrative that might do justice to the need for a truly postanthropocentric *and* humanitarian ecologic, and even though "we" may trust neither the sense of uniqueness (at an individual, species or cosmological scale) nor of wonder, it would seem impossible to motivate any ecological ethics and politics without them. But, arguably, this is precisely what the phrase "*perdre la mesure*" means.

Ghosting the (Human) Future

> The fantasy of the future as catastrophe is the emblem of a new, highly ambivalent attitude toward the future, marked by a strange fixation with catastrophe as a moment when an ultimate truth is revealed. (…) The basic idea is that, when push comes to shove, the true essence of our existence will come to light.[159]

In fact, if "we" are honest, we already know what the future brings. It is a foregone conclusion.[160] It is a future without "us", without humans. The future is *necessarily* posthuman, literally. The question merely is, how much time have "we" got? How much time before the *Interstellar* scenario becomes real? If thought were to go on after the death of the Sun in 5 billion years, it will have had to transform into an entirely other, postbiological, form, leaving the "body" behind and thus freeing the mind for intergalactic space travel. "Thought" will inevitably have to leave the Earth behind to escape the "solar catastrophe".[161] The psycho-social effects of this knowledge are manifold and are of course exacerbated by the current climate crisis, which quite obviously seems like a "taster" of what lies ahead, something that a whole array of apocalyptic and postapocalyptic science fictional and science factual scenarios are "banking"; *Interstellar* here only serves as a convenient example.

The future is necessarily catastrophic, without us, posthuman. The options are clear: even if we can stave off the devastating potential of global warming, persisting nuclear and new and future biotechnological threats, asteroid impacts and all the other extinction scenarios, it is all going to be

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[157] *Ibid*., p. 96.

[158] *Ibid*., pp. 151-152.

[159] Eva Horn, *The Future as Catastrophe: Imagining Disaster in the Modern Age*, trans. Valentine Pakis (New York: Columbia University Press, 2018), p. 5, 12.

[160] For an early critique of this form of "foreshadowing" see Michael André Bernstein, *Foregone Conclusions: Against Apocalyptic History* (University of California Press, 1994).

[161] Cf. Ray Brassier, "Solar Catastrophe: Lyotard, Freud, and the Death Drive", *Philosophy Today* 47.4 (2003): 421-430.

inevitably end in catastrophe. The question is will "we" actually (still) be here to witness it? The "world without people", for some at least, does not seem such a frightening but rather a strangely soothing prospect of "peace at last".[162] The problem is that these visions of "the world without us" scenarios "adopt an impossible postapocalyptic standpoint":

> Humankind looks back upon itself *after* its end. It is a gaze in the future perfect, a future that *will have been*. This perspective, that is, a gaze looking back on the future *as past*, is emblematic of our current relation to the future. And this relation to the future seems to be inevitably dependent on narratives, fictions, or fictional modes of thought [or, "speculation", as one might say; SH] – even in the most nonfictional genres.[163]

There is thus another *dédoublement* (doubling and splitting) at work here: 1) the current "imaginary" obsession with world-without-us-scenarios in the "Anthropocene", which strictly speaking is a continuation of a certain, if "denied", anthropocentric positon that extends the human(ist) gaze into a future that looks back in the form of a (hopefully) reassuring "legacy" (see, it wasn't all bad, the world, the universe, God etc. might actually "miss us");[164] and 2) a kind of rebellion against the apparent finality of the apocalyptic acceptance of things and a denial of the destructive nature of the "*anthropos*" (i.e. the Anthropocene as intermediate stage that shows that the planet has become too "small" for "our" true ambitions and potential. Critical posthumanism has to oppose (or "split") both of these poles. The first is opposed by the "life-affirmative" strands of feminist new materialist posthumanism, the second involves a critique of technocentric transhumanism.

For sure, the evolutionary track record of complex species survival is anything but great, actually nil. It therefore seems to make sense to hedge all "our" bets and to speculate on adding more protective technological spheres to our bio-social, ecological and cultural ones,[165] to transform and end biological (Darwinian) evolution into a technological developmental one – the transhumanists' dream. Just like for the ancient Gnostics, for transhumanists the biological creation is fundamentally flawed. It cannot be the "intelligent design" that was meant to be (either as the invention of a spiritual "creator" or some "cosmic principle").[166] It therefore needs to be rejected, rebelled against and transformed, perfected.

> Transhumanist Futures, as Michael S. Burdett explains, draw on technological utopianism and science fiction to assert that "technology is the panacea that will cure all ills and will lead humanity into the future".[167]

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[162] Cf. Horn, *The Future as Catastrophe,* p. 2.

[163] *Ibid*., p. 4. This is also the starting point for Marija Grech's already mentioned study (and discussed in more detail below), Spectrality and Survivance: Living the Anthropocene; see also my *Before Humanity: Posthumanism and Ancestrality* on the connection between "world-without-us" scenarios and the retrospective (paleoanthropological) extension of posthumanism into "deep time" (i.e. "before-the-human" scenarios) in this context.

[164] Cf. Alan Weisman's by now "classic" statement in *The World Without Us* (New York: St. Martin's Press, 2007), p. 5: "With our passing, might some lost contribution of ours leave the planet a bit more impoverished? Is it possible that, instead of heaving a huge biological sigh of relief, the world without us would miss us?"

[165] Cf. Peter Sloterdijk, *Spheres* Trilogy, trans. Wieland Hoban (Minneapolis: MIT Press, 2011-2016).

[166] It is a kind of post-existentialist rebelling against the human condition of finitude and "unnecessary" suffering and "premature" death. A classic example is Nick Bostrom's "Letter from Utopia" (2010), available on his website at: https://nickbostrom.com/utopia (accessed 1 June 2025), for example, which states that: "Any death prior to the heat death of the universe is premature if your life is good". See also Robert C.W. Ettinger, *Man into Superman* (1989); available at: https://cryonics.org/cryonics-library/man-into-superman/ (accessed 1 June 2025).

[167] Michael S. Burdett, *Eschatology and the Technological Future* (New York: Routledge, 2015), p. 80.

However, humanity in the process is likely to be transformed by some "disruptive" and "disconnective" technological "Singularity" event, "unintelligible" in its extent and effect (like for example autonomous and conscious AI "taking over") into "posthumanity" – a central transhumanist "narrative" with clearly mystical if not spiritual features.[168] These "posthuman" futures are based on "visions of radical change and technological forecasting".[169] Most importantly, however, they are ultimately aimed at a joyful supersession of the technologically "obsolete" human[170] – a future without humans.

In fact, one might argue that both of these trajectories (the farmer versus the astronaut, the "bioconservative" ecological "more-than-human" versus the technologically "enhanced" posthuman, the "world-without-us" versus the "more-than-terrestrian" futures etc.) are merely two faces of the same coin, and that coin might be labelled the "ghosting" of the (human) future".[171]

Interstellar's particular version of a time-loop narrative – a father (Cooper) travelling into the future because of a signal given to his daughter (Murph) by a future self, through a wormhole strategically placed by a future (post)humanity to allow "present" humanity afflicted by environmental catastrophe to escape the planet and in doing so ensuring the very future survival of the beings who placed the wormhole there in the first place – a classic case of a "time-loop" resembling serpent biting its tail.[172] The ghostly future (post)humans provide a five-dimensional structure of a "tesseract" for Cooper to communicate with his daughter as a "ghost" from the future to enable her (and NASA) to overcome planetary gravity and build the necessary space stations for humanity to leave the dying planet.[173]

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[168] Cf. Apolline Taillandier, "'Staring into the Singularity' and Other Posthuman Tales: Transhumanist Stories of Future Change", *History and Theory* 60.2 (2021): 215-233.

[169] *Ibid*., p. 17.

[170] Even though most transhumanists seem generally and blissfully unaware of Günther Anders's critique of this development (towards "human obsolescence", or humans' "Promethean shame" vis-à-vis their technological creations in a kind of perverse form of "machine envy"); cf. Anders, "On Promethean Shame", in Christopher John Müller, *Prometheanism: Technology, Digital Culture and Human Obsolescence* (London: Rowman & Littlefield, 2016), pp. 25-95.

[171] It is certainly no coincidence that "ghosting" has become wide-spread practice on social media and beyond, as defined by the *OED* online, as "The action of ignoring r pretending not to know a person, esp. that of suddenly ceasing to respond to someone on social media, by text message, etc.; the action of ending a relationship or association with someone by ceasing all communication" (accessed 1 June 2025). On the one hand, it is the special affordance of social media technology that facilitates emotional and social, "disembodied" proximity, visibility and availability while at the same time exacerbating the emotional and psychological distress due to sudden and unmotivated withdrawal or, even worse, exposure and betrayal, leaving the ghosted to guess for the motivations of the ghoster. In a sense it is a "betrayal" facilitated by technology to avoid confrontation, conflict, or maybe also of taking responsibility that clearly resembles the idea of humans "arguing themselves out of the picture" in post-Anthropocene "world-without-us" scenarios. On the effects of ghosting see for example: Jhanelle Oneika Thomas and Royette Tavernier Dubar, "Disappearing in the Age of Hypervisibility: Definition, Context, and Perceived Psychological Consequences of Social media Ghosting", *Psychology of Popular Media* 10.3 (2021): 291-302, and Lateefa Rashed Daraj et al., "Ghosting: Abandonment in the Digital Era", *Encyclopedia* 4 (2024): 36-45.

[172] A case of "warped spacetime travel" according to Nick Effingham, who specifically refers to *Interstellar*; cf. Effingham, *Time Travel: Probability and Impossibility* (Oxford: Oxford University Press, 2020), p. 20, and an example of the so-called "bootstrapping paradox" (p. 59). Ultimately, however, "Interstellar simply allows something that always had taken place (Murph's ghost sending her messages) to occur, creating the conditions for it to happen"; cf. Jacqueline Furby, "About Time Too: From *Interstellar* to *Following*, Christopher Nolan's Continuing Preoccupation with Time-Travel", in Furby and Stuart Joy, eds., *The Cinema of Christopher Nolan: Imagining the Impossible* (London: Wallflower, 2015), pp. 247-267 (253).

[173] In this "self-fulfilling prophecy" scenario that resembles Slavoj Žižek's description of the logic of the unconscious of trauma (in *The Sublime Object of Ideology* (London: Verso, 1989), p. 57-58; quoted above) one might see, as Amar Singh suggests, a case of "future trauma": "Can the trauma of the future be experienced in the present? What is the possibility of something that has not yet occurred having its effects felt in the present?" (cf. Singh, "A Foreshortened Future and the Trauma of a Dying Earth in Christopher Nolan's *Tenet*", *Humanities*

What is symptomatic is the "spectral" or "hauntological" structure that is invoked to create some plausibility for this particular form of a "defuturising" technique (to recall Luhmann's terminology).[174]

Future Politics – (Re)Constructions of the Future

> We live in a world in which the past is trying as hard as possible to eat the future as efficiently as possible. Every year the past gets better at eating the future. Keeping the future open, refocusing humankind on the spectre of futurity: this is a key task of ecological politics.[175]

In the Anthropocene and the "world-without-us" scenarios of extinction, we seem to have travelled from "humans being haunted by the future" to "humans haunting the future" in an attempt to "re-centre" the human albeit in a negative, absent form of (self)denial.[176] It is a costly self-denial or "self-spectralisation", that risks abdicating human responsibility and agency at a time when the "human" finds itself in a situation that combines several forms of "misanthropy". The "strategic misanthropy" as one might call it, of (critical) posthumanism in its campaigns against anthropocentrism on the basis of ethical claims some humans advocate on behalf of nonhumans (be they nonhuman animals, plants, objects, environments, known and alien life forms, the planet or even the cosmos) as part of a future politics committed to "multispecies justice", on the one hand. And on the other hand, there is a rather literally misanthropic "system" that takes Günther Anders's notion of human "obsolescence" brutally seriously. It comes in two forms, both however are underpinned by and serve the interests of a technoscientific capitalism for which neoliberal globalisation has reached a dead end. This dead end is, on the one hand, the limitation of its own "subject", i.e. the "human consumer", and, on the other hand, the finality of its "habitat" which poses a threat to its continued reliance on all sorts of "extractivism" of resources (said humans included).[177] The other version of seriously misanthropic

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12.22 (2023): n.p.). Even though Singh focuses primarily on Nolan's film *Tenet* one might claim that this particular "proleptic" form of trauma is at stake in other Nolan films, including *Interstellar*, which suggests that they speak to a very symptomatic feature of the contemporary cultural imaginary caught between the two "alternatives" or "ecologics" outlined above.

[174] A technique ("time-looping") also at work in contemporary financial capitalism, derivatives and future options, cf. Marcia Klotz, "Of Time Loops and Derivatives: Christopher Nolan's *Interstellar* and the Logic of the Futures Market", *CR: The New Centennial Review* 19.1 (2019): 277-298, discussed in more detail in chapter X on "Posthumanism and Economy" in this volume.

[175] Timothy Morton, *Humankind: Solidarity with Nonhuman People* (London: Verso, 2017), p. 153. Morton discusses *Interstellar* in some detail the context of his search for a new ecology based on solidarity between humans and nonhumans (cf. pp. 145-162). See also my *Solidarities with the Non/Human, or, Posthumanism and Literature* (Leiden: Brill, 2025), *passim*.

[176] This is precisely the trajectory that Marija Grech seems to analyse in her study *Spectrality and Survivance*, in focusing on and critiquing what she calls "future-retro-visions":

> The Anthropocene paradigm is structured by a gesture of future-retro-vision in which the present functions s a spectral past of a speculative future. (…) While it makes the present absent to itself through the spectrality of its gaze, the future-retro-vision of the Anthropocene remains predicated on the possibility of a human presence that *continues to haunt the future* – it posits an absence that *remains present* as a spectral trace of itself, lingering on in the space of its own supposed nothingness. (…) This anthropocentrism … is rooted in future-retrospective gestures that appear to *defamiliarise* the present, inviting us to confront the possibility of our own demise and the non-existence of the world as we know it, but that simultaneously also continue to reassert the *presence* of the human upon earth in a way that undermines the possibility of thinking any true human absence" (Grech, *Spectrality and Survivance*, p. 6).

[177] See chapter x on "Posthumanism and Economy". There is certainly an analogy here with Lyotard's two forms of "inhumanism", that of the "infant" and that of the "system" of "development"; cf. Lyotard, "Introduction: About the Human", in *The Inhuman: Reflections on Time*, trans. Geoffrey Bennington and Rachel Bowlby (Cambridge: Polity Press, 1991), pp. 1-7. For a discussion see my Dehumanisation, or, Humanism Without

ideology is that of transhumanism, which at face value presents itself as the protector of humans and humanism but whose ultimate goal is the replacement of the human by a non-biological and disembodied entity. It is no coincidence that the majority of transhumanists, while they foresee and even strive towards a future without humans, do not envisage an end of capitalism. On the contrary, one might say, with Don DeLillo, "that everybody wants to own the end of the world".[178]

This dangerously "misanthropic" situation that no return to or renewal of humanism, nor any radical post- or transhumanism is prepared to fundamentally address, is what one might call the contemporary face of "futurecide" (for humans, nonhumans and all other others). But from whence, to take up my initial question again, can a future future arrive that would open up a new political space or a new space for an entirely other politics? It seems we only have two options when it comes to futurity, either to speculate or to resist the urge of speculation. Following the gnostic "logic" of "*askesis*" both options come with a range of possibilities: one can speculate more or less "realistically", one might even "accelerate" speculation as both financialisation, derivatives and contemporary finance capitalism as well as accelerationism do,[179] in the hope of catching up or catching out the unknowability of the future, to break through some horizon of invisibility or simply by bringing down that horizon altogether placed there by some cruel demiurge – this could be the "accelerationist" way. On the other hand, resisting speculation necessarily comes with some form of abstention in the hope of save-guarding the "real" – Baudrillard and posthumanist "matter-realists" would know about this.[180] We are back at the choice between astronauts and farmers scenario of *Interstellar* it seems. However, "raging against the darkness of the night" won't help much in our situation unless the future itself can be opened up again and "repoliticised".[181] The only way to achieve this is, through a new form of human self-affirmation that does not lead, however, into a new phase of triumphalism and exceptionalism. One possibility certainly lies in the resistance to "automation" that technoscientific capitalism increasingly imposes on humans and the planet.[182]

Humans", in *(Un)Learning to Be Human? Collected Essays on Critical Posthumanism, vol. 1* (Leiden: Brill, 2024), pp.235-252.

[178] Cf. Don DeLillo, Zero K (New York: Simon & Schuster, 2016), pp. 3, 274. These are virtually the first and last lines of the novel. See my "Posthuman/ist Literature? Don DeLillo's *Point Omega* and *Zero K*", *Open Library of Humanities* 6.2 (2020): 1-25. One might certainly read this as an echo of Naomi Klein's notion of "disaster capitalism", cf. Klein, *The Shock Doctrine: The Rise of Disaster Capitalism* (New York: Metropolitan Books, 2007). See also chapter x on "Posthumans and Economy" in this volume.

[179] On the connection between gnosticism, accelerationism and financialisation see chapter x on "Posthumanism and Economy".

[180] Cf. Jean Baudrillard's classic on the death of the "real", in Simulacra and Simulation, trans. Sheila Faria Glaser (Ann Arbor: University of Michigan Press, 1994). For the notion of "matter-realism" that underlies most of feminist new materialism see Rosi Braidotti, *The Posthuman* (Cambridge: Polity, 2013), p. 57 and *passim*. See also chapter x on "Biopolitics and New Materialism" in this volume.

[181] Cf. Daniel Innerarity, *The Future and Its Enemies*, *passim*; two options seem to present themselves, again, both of which will have to be viewed with some scepticism: one, is basically an "ecological" argument for "longtermism" and intergenerational "debt" – cf. for example William MacAskill, *What We Owe the Future: A Million-Year View* (London: Bloomsbury, 2022) – and two, a technological-transhumanist (ultimately "post-political) vision exemplified by Jamie Susskind, *Future Politics: Living Together in a World Transformed by Tech* (Oxford: Oxford University Press, 2018).

[182] Which means a combination of Franco Berardi's critique of "semio-capitalism" and Bernard Stiegler's analysis of "disindividuation" and "proletarianisation", both discussed in detail in chapter X "Posthumanism and politics". See, in particular, Berardi, *After the Future*, and Stiegler, *What Makes Life Worth Living: On Pharmacology*, trans. Daniel Ross (Cambridge: polity Press, 2013).