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**DIGITAL LIMIT SITUATIONS:
ANTICIPATORY MEDIA BEYOND
'THE NEW AI ERA'**

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ABSTRACT

In the present age AI (*artificial intelligence*) emerges as both a medium to and message about (or even *from*) the future, eclipsing all other possible prospects. Discussing how AI succeeds in presenting itself as an arrival on the human horizon at the end times, this theoretical essay scrutinizes the 'inevitability' of AI-driven abstract futures and probes how such imaginaries become living myths, by attending how the technology is embedded in broader appropriations of the future tense. Reclaiming anticipation existentially, by drawing and expanding on the philosophy of Karl Jaspers – and his concept of the *limit situation* – I offer an invitation beyond the prospects and limits of 'the new AI Era' of predictive modelling, exploitation and dataism. I submit that the present moment of technological transformation and of escalating multi-faceted and interrelated global crises, is a *digital limit situation* in which there are entrenched existential and politico-ethical stakes of anticipatory media. Attending to them as a 'future present' (Adam and Groves 2007, 2011), taking responsible action, constitutes our utmost capability and task. The essay concludes that precisely here lies the assignment ahead for pursuing a post-disciplinary, integrative and generative form of Humanities and Social Sciences as a method of hope, that engages AI designers in the pursuit of an inclusive and open future of existential and ecological sustainability.

Keywords: anticipation; existential philosophy; Karl Jaspers; AI; existential media; uncertainty; surveillance capitalism

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The age of great and good actions is past; the present age is the age of anticipation.

Søren Kierkegaard, *Two Ages: The Age of Revolution and the Present Age – A Literary Review*

(30 March 1846, p. 253)

This act of will is my claim to the future tense.

Shoshana Zuboff, *The Age of Surveillance Capitalism* (2019, p. 329)

Give yourself up neither to the past nor to the future.

The important thing is to remain wholly in the present.

Karl Jaspers, *Philosophische Logik* (1958, in *Hannah Arendt/Karl Jaspers Correspondence, 1926-1969*, 1992, p. 153)

1 INTRODUCTION: HORIZONS OF ‘THE NEXT CENTURY WITH AI’

AI (*artificial intelligence*) is mounting on the human horizon. Numerous prophecies have in the past few years flooded public discourse, stating that we are inevitably moving into a future driven by autonomous systems with transformative consequences for families and households, the ways we work, produce things, prevent crime, and take care of our vulnerable, sick and elderly (cf. Kelly 2016). For many visionaries, the horizons of AI promise to provide better solutions — increased accuracy, efficiency, cost savings, and speed — to our many problems, and to offer entirely new insights into behavior and cognition. For others, they also usher in new threats and fears about existential risks to our species of an AI superintelligence surpassing that of humanity (Boström 2014). Yet for major agents the main risk seems to be to fall behind in racing toward this new future. Therefore, commercial interests blend with chief geopolitical and military wagers, as exemplified by North American stakeholders who aim to ensure that “the coming AI century is an American one”.¹

Boosted by corporate concerns about avoiding another ‘AI Winter’ — when confidence in the promises and potentials of these technologies may languish and investors may withdraw — the ethical imperatives raised by these technologies have also spurred an entire ‘industry’ which mobilizes for example investors, academia, governments, engineers and think tanks seeking to promote and secure sustainable, benevolent, responsible and ethical AI. Yet, positing AI as both a medium to and message about (or even *from*) the future, measured as well as unbridled responses, utopian as well as dystopian scenarios, in fact allow this technology to eclipse all other possible prospects (cf. Dencik 2018, 2020, McQuillan 2019). The expectations for ‘the next AI century’ are here saturated with what Donald MacKenzie and Judy Wajcman (1999) call a “technological trajectory,” which is an

¹ The Center for New American Security promises to ensure “...a new technological era where America’s national security — and that of U.S. allies and partners — is more secure, its economy is poised to flourish, and its norms and values underpin AI technologies worldwide” <https://www.cnas.org/publications/reports/the-american-ai-century-a-blueprint-for-action>. The Chinese government and weapons industry, on their part, foresee that lethal autonomous weapons will be commonplace by 2025, and claim that ever-increasing military use of AI is “inevitable [...] We are sure about the direction and that this is the future.” Gregory C. Allen reports for The Center for New American Security about the Chinese AI policy, here citing Zeng Yi, a senior executive at China’s third largest defense company, Norinco, at the Xiangshan Forum. See <https://www.cnas.org/publications/reports/understanding-chinas-ai-strategy>. See also China State Council, “Made in China 2025,” July 7, 2015; English translation available at <http://www.cittadellascienza.it/cina/wp-content/uploads/2017/02/IoT-ONE-Made-in-China-2025.pdf>

institutional form of technological change that entails a “course of development that seems natural and autonomous” (Gates 2011, p. 24). The massive mobilization of this future across the board is thus awash with “illusions of inevitability” (ibid), that is what Shoshana Zuboff in *The Age of Surveillance Capitalism*, recently calls ‘inevitabilism’ (2019, p. 194, pp. 222-224). This future is now, as Zuboff alerts us to, part of a larger project of instrumentarian and rogue surveillance capitalism, which has powerfully lured us all into an iron cage of datafication where human experience is rendered as behavioral data. This implies a massive mining of our bodies and inmost lives, excavating the depths of human existential needs, without consent.

Zuboff argues that this is a new frontier of power, a new form of capitalism which operates through a ‘ubiquitous apparatus’ (that is Google, Facebook, Apple etc.) that declares the right to harvest our behavioral data and to shape behavior in the real world. This apparatus has hijacked the promises held by new media technologies and digitalization. It thus succeeds primarily by exploiting what second modernity humans caught up on the grids of callous bureaucracies, actually crave and expect of life: their inner sense of worth and dignity, their search for value, meaning and self-expression. In the process of filling those vast voids with effective, accessible technologies that promise to make life worth living, absolute *certainty* has replaced trust for the purpose of control. This for the ultimate benefit of the few and with nothing less than the human future in the balance. Beyond what she calls ‘the prediction imperative’ (ibid, pp. 197-200) the tech agents are within the ‘economies of action’ involved in molding our future behavior, and thereby rob us of a future tense. Hence, AI – one key technology in this drama – not only sits on but seemingly also closes the horizons of futurity.

This enclosing scenario might make Danish philosopher Søren Kierkegaard (1813-1855) roll over in his grave. In his fervent critique of ‘the present age,’ (1846) he painted it as devoid of passion; serious, abstract and calculating while indulging itself in endless publicity and public relations activities, only offering ‘reflection’ in the shape of sober thought or bland imagery. He argued that in the present age of modernity, we are reduced to quantifiable common denominators – to a ‘public’ – and in fact disabled from *real action*. Nothing is unforeseen: “The age of great and good actions is past; the present age is the age of anticipation” (ibid, p. 253). ‘Anticipation’ for Kierkegaard thus refers to the urge of exacting everything in advance, which also feeds into the leveling of the value of the unique singular human being, and in turn disables and nullifies human choice, action, and ethical responsibility.

The horizons of AI are one evident outcome of the statistical attitude that Kierkegaard deeply lamented in his time. For contemporary techno-

progressivists who promise to leverage AI to solve humanity's many problems, 'anticipation' is understood in ways that reflect how modernity at large executes "an '*abstract future*' subject to deterministic or probabilistic laws for science, economics, and public administration" which in turn leads to "the pursuit of *empty futures*" (Adam and Groves 2011, p. 17, italics added). The hype around predictive AI is thus forging such a rampant form of modernity which entails a "de-contextualized future emptied of content" [...] "open to exploration and exploitation, calculation and control" (Adam and Groves 2007, p. 2).

The purpose of this essay is to scrutinize the 'inevitability' of AI-driven abstract futures, and probe how such imaginaries become living myths, by attending how the technology is embedded in broader appropriations of the future tense. In addition, I suggest that we in a creative and unorthodox manner turn to the philosophy of German existentialist Karl Jaspers in order to provide an existentialist understanding of (media) futures and of anticipatory media. I see anticipation as a centrally important concept to reclaim and safeguard from those less good forces who own it now (the robber barons of the platform society, the high tech monopolizers) but also ultimately for scholars of digital society and of existential media studies to set out to collaboratively theorize. This is because imagining the future is an *existential practice* (Josephides 2014), an irreducible aspect of being human that belongs to us and to our faculty of anticipation.² I take my cue from Barbara Adam and Chris Groves who "imagine different ways of acting responsibly in creating futures." Through a Heideggerian framework of *care* they offer "some new conceptual coordinates for thinking about the ethical underpinnings for our relationship with the future and for reshaping the legal and thereby the political expressions of our responsibilities to it. They might help restore a sense that the future matters" (2011, p. 17-18).

I suggest that Jaspers' thinking will offer precisely such "new conceptual coordinates", that can be helpful in this project of conceptualizing anticipation and a lived future in and of the present, since it will forefront the inherent uncertainties of being and what Jaspers calls the *limit situations* of life (1932/1970). The present age of technological transformation and of escalating multi-faceted and interrelated global crises (Gasper 2018) – I argue, is a *digital limit situation* in which there are entrenched existential and politico-ethical stakes of anticipatory media. Attending to them, taking responsible action, constitutes our utmost capability and task. In fact, responsibility is the cornerstone of Jaspers'

² Scholars in the field of anticipation studies see anticipation as a faculty fundamental for both human flourishing, creativity, ethics, politics and for society as a whole, and for the technologies we build and embrace to ultimately enable (cf. de Miranda et al 2016).

political philosophy and “ethical theory, which sees human life as self-creating, autonomous and plural, but also supremely, if not universally, accountable” (Thornhill 2002, p. 6). Taking responsibility for AI also means, importantly, pausing in the present in order to collaboratively shape the future. Yet, this feeling that we are *on the brink of something*, the sense of both occasion and urgency, is in fact also a ‘zeitgeist’ of sorts, a major current of our time resonating in popular discourse as well as formal, academic and economic thinking (Guyer 2016). These gravitations to the present moment now enhanced by the pandemic, compel a reorientation: a slowing down to think about core values and chief priorities – both in life, scholarship and society (cf. for example Corpus Ong and Negra 2020, Henderson 2020, Dencik 2020). The present moment is in fact a time when human beings – in all our diversity – could potentially begin to realize what Barbara Adam and Chris Groves call a *concrete practical future* with technology (2007). AI on the human horizon thereby presents us with a momentous assignment. How we respond depends on how we conceive of media.

2 FROM LIFE-APPARATUS TO EXISTENTIAL MEDIA

In a classic move, Zuboff opposes the “tyranny of prediction” to a “human future”. This reflects a distinction in Jaspers’ work (as well as among many critics of modernity and mass culture of his generation), between technological deprivation and human value (1931, 1951). Echoing Kierkegaard, Jaspers sees a problematic hollowing out of meaning and value – the result of modern technological culture in which “[e]ssential humanity is reduced to the general” (Jaspers 1931, p. 49). For Jaspers this has wide consequences for limiting humanity: “Limits are imposed upon the life-order by a specifically modern conflict. The mass-order brings into being a universal *life-apparatus*, which proves destructive to the world of a truly human life” (ibid, p. 44, italics added). He further states that “[t]he universalization of the life-order threatens to reduce the life of the real man (sic!) in a real world to mere functioning” (ibid, p. 45).

To renew its relevance, Jaspers’ systemic critique will obviously need an upgrading.³ For example, important debates in critical data studies have problematized not only how technological systems are exploiting our datafied lives, but also how they are rehearsing and amplifying, instead of checking, human prejudice, bias and stereotyping (see for example Noble 2018, Bucher 2018, Eubanks 2018). It is also necessary to incorporate contemporary empirical insights from media sociology and anthropology,

³ This is a key methodological approach in existential media studies, which in interesting ways overlaps with calls for upgrading theoretical paradigms to the actualities of a data-driven social world (Lindgren 2020).

inspired by (post-)phenomenological and new materialist understandings of the onto-epistemological dimensions of human-data assemblages. Big Data and biometric technologies for example are both part of the body politic and habitual, meaningful, entangled and mundane data with varied and contextually bound uses and meanings. Even if they exploit, surveil and reduce humans as Jaspers would say, they are also productive as they bring into being new forms of knowledge and social relations, new assemblages and webs of everyday ordinary life-flow, new data subjectivities and forms of embodiment (see for example Lupton 2016, Pink and Fors 2017, Pink et al 2017, Kennedy and Hill 2018, Guzman 2019).

In keeping with such acumens, I however take my main lead from Jaspers in placing particular emphasis on limits – as well as how they relate to radical uncertainty, openness and fecundity in the present – to offer nothing more and nothing less than what I believe to be central prompts for thinking about an existentially sustainable future in which we become human with machines (cf. Kember and Zylinska 2011). This themed issue seeks to shed light on the fact that AI is always socially embedded. I argue in addition that precisely because humans and machines are co-implicated and co-constituted recursively and because data are mundane and deeply enmeshed in our lives – and in light of critical insights about surveillance capitalism – the question of how to realize *existentially sustainable anticipatory media* is even more pertinent to raise. I will offer a twin reconceptualization of anticipatory AI as existential media, and of existential media as in fact anticipatory by nature. Hence, as an exercise in existential media studies, which combines a materialist understanding of media with Kierkegaardian and Jaspersian wisdom, I submit that existential media (Lagerkvist 2016) – that both condition and are conditioned by the digital limit situation – have four interrelated properties that I hope to substantiate throughout. They are, first as John D. Peters would say “our infrastructures of being” (2015, p. 15) which means that they ground us materially in existence. Yet, they also, second, throw us up into the air, and in their contingency they in fact ambivalently limit us and offer radical openness at the same time. Third, they furthermore speak to and about ordinary human (yet unevenly distributed) vulnerability and deep relationality. Finally, they demand responsive action. The latter property is heavily influenced by the existential stakes of the present age of anticipation as prediction.

3 EXISTENTIAL STAKES AND SITUATED BEING(S) OF AND BEYOND DATA

Indeed, the human capacity to anticipate, aspire, and look forward – what Edmund Husserl calls ‘protention’ – seems kidnapped by machines and

screens (Lagerkvist 2018). For Zuboff, the entire future for humanity is therefore now at risk. When the future tense itself seems lost, there are deep existential stakes. Zuboff is passionately searching for an existential language to describe this sense of demise and loss of possibilities for willing the future itself, in a world of all-pervasive datafication and automation. Echoing one influential strand of the existentialist tradition which submits that the very possibility of projecting ourselves into a future (Heidegger 1927, Sartre 1943, de Beauvoir, 1947, Schutz 1972, Arendt 1978) is key for what makes us human, she holds that “the freedom of will is the existential bone structure that carries the moral flesh of every promise, and my insistence on its integrity is not an indulgence in nostalgia or a random privileging of the pre-digital human story as somehow more truly human” (2019, pp. 330-331). She further contemplates:

No matter how much is taken from me, this inward freedom to create meaning remains my ultimate sanctuary. Jean-Paul Sartre writes that ‘freedom is nothing but the *existence* of our will,’ and he elaborates: ‘Actually it is not enough to will: it is necessary to will to will.’ The rising up of *the will to will*, is the inner act that secures us as autonomous beings who project choice into the world and who exercise the qualities of self-determining moral judgment that are civilization’s necessary and final bulwark. (Zuboff, 2019, p. 290, italics in original)

Hence, we may ask in similar vein whether Big Data, AI and machine learning of the present age, with their technocratic, entrepreneurial and capitalistic ethos, will further hamper (as Zuboff details) the prospects for realizing ourselves through projects of our will. Or will they even relieve humans of the responsibility they have for their lives, for each other, and for the planet? Do they in fact offer an escape from that responsibility for those Kierkegaardian choices and actions that shape the future? Yet, while Zuboff’s freedom of will is important, I hold that we actually need an even broader existentialist purview to address the existential stakes of AI futures and their imaginaries. We thus need to ask in addition whether these technologies could in fact become part of what Arjun Appadurai describes as an *ethics of possibility* based on “those ways of thinking, feeling and acting that increase the horizon of hope, that expand the field of the imagination, that produce greater equity” within our aspirational capacities so as to “widen the field of informed, creative and critical citizenship”? (2013, p. 295).

In their seminal work in anticipation studies, Barbara Adam and Chris Groves have identified a weakness within the abstract futures model: “the key problem for an empty futures perspective remains that the future is not simply beyond the present but is a latent and ‘living future’ *within it*” (2011, p. 17, italics in original). They argue for turning to the existentialist tradition

to reconceive of the living future, which we have to tend to and care for, by caring for each other, as well as for the objects, phenomena and progressive ideas, and other beings that we share our existence with (ibid, p. 24). They conclude that different forms of social action “facilitated by advanced technologies and complex social structures need to be based around a different image of the future” (ibid, p. 17). One possibility, they hold, is the kind of “‘lived future’ that is articulated in Heidegger’s (1998) account of *Dasein*’s characteristic temporality” in combination with perspectives from Hans Jonas’ biology. They hold that “[t]he perspective of a lived future, dependent on a situated subject whose being is an issue for it, relates itself very differently to the living, latent futures of action that surround it and in which it itself is embedded” (ibid, p. 18).

As discussed above, consulting Jaspers enriches and complements the temporal subjectivities of for example Heidegger’s sense-making and resolute, yet anti-subjectivist, *Dasein* and Sartre’s subject that wills to will. For Jaspers there are three modes of being human. The first is *empirical existence* existing in a material world of basic desires. Second, we are *consciousness in general* which pertains to the faculty of abstract thinking, logos and mathematics. Third, human beings are *spirit* which encapsulates our attempts to create a whole, a world view, out of fragments in for example ideologies and religions. But there is yet one form of potential being: as realized *Existenz*. This form defies objectivity: it defines human beings in authenticity, singularity, inwardness and transcendence – and in truth in/as communication. Realized *Existenz* is a potential for each of us, but also something we may fail to be.

In Jaspers’ philosophy human beings furthermore always and inevitably find themselves in situations: “existence means to be in a situation” (1932/1970, p. 178). There are two types of situations. The first is the immanent type of *situations in existence*. In general, we are born into a particular time and space, in which we face and share certain historical circumstances and conditions. Our being in situations in existence is also concrete, every day, material. This applies to us all, yet situations in existence are socially diversified. This type of situatedness is “*a reality for an existing subject who has a stake in it*, a subject either confined or given leeway by the situation in which other subjects, their interests, their sociological power relations, and their combinations or chances of the moment all play their parts” (1932/1970, p. 177, italics in original). This empirical existence can be captured by *data*:

At each moment I exist by given data, and I face given data to which my will and my actions refer. This is how I am for myself as empirical existence, and how the definite world to which I have access exists for me as a datum I can mold. The real situation confines me, by its resistance, limits my freedom and ties me to restricted possibilities. (ibid, p. 185)

But there is infinitely more to being human in our situation than our data – or perhaps as we would today put it, our ‘metadata’. There are also the *transcendent limit situations of life*: “Situations like the following: that I am always in situations; that I cannot live without struggling and suffering; that I cannot avoid guilt; that I must die – these are what I call boundary situations” (ibid, p. 178). Limit situations of for example crisis, conflict and death, underscore the singularity of our human lives. We have to enter into them with open eyes; they require something of us, and offer a possibility of realizing our *Existenz* together (1932/1970, p. 64). While the limit situation affords an important role to inwardness it is both a shared affair, and tied to political and social responsibility. As Chris Thornhill has pointed out, “Jaspers’ theory of existential interiority is in fact at all times correlated with a strong Kantian and Weberian dimension, which views existential authenticity as the foundation for an ethic of social and political responsibility, not as the static celebration of isolated subjectivity” (2002, p. 3). This is why the concept of the digital limit situation is apposite for describing this uncertain moment which simultaneously entails a future seemingly destined to be forged by AI; a present before which we are called to awaken ourselves collectively. The concept grasps the urgency and severity of those cataclysmic transformational forces of the present moment; it allows for thinking about the gravity of the situation and the responsibility we have for it.

Drawing inspiration from, yet expanding on Jaspers’ thinking I have reconceived of humans (and of ‘media users’) as singular-plural, deeply relational, technological, situated, embodied and responsible beings – as *coexisters* (Lagerkvist 2016, 2019). Contingent upon limits of both knowledge and self-awareness, they exist within the biosphere together with other humans, machines and more-than-humans. The coexister is not the discrete rational and moral subject of old-school humanism who is certain, independent and disembodied. Instead the coexister is that being that strives, hurts and hopes and is often clueless; that realizable *Existenz*, who possesses the human potential for flourishing which we always do in deep relationality with both fellow humans, as well as with animals, tools, machines and networks. Coexisters are *thrown* into the contemporary digital limit situation; deeply entangled they still possess the capacity to act and chose and respond – and anticipate – yet within limits and never in isolation. In that way coexisters are in fact proficient to collaboratively chart a (media) future in carefully attending to the present.

Here AI technologies and imaginaries play major roles, bearing on how we may or may not anticipate the future. In order to further open these vistas, I will offer a minor mapping of key concepts, definitions and insights within *anticipation studies*. How do contemporary media futures map onto

the concept of anticipation itself? And what are the alternatives – how can we conceive of anticipation existentially?

4 ANTICIPATORY MEDIA: FROM ABSTRACT MEDIA FUTURES TO ANTICIPATION PROPER

Media studies as a field has a peculiar and complicit relationship to media futures and their imaginaries. Media of the bleeding edge figure more or less unconsciously, as both pointers to and foretellings about ‘the Future’. Due to the anticipatory features of data and predictive modelling, however, the relationship between media and the future is changing. This has in turn prompted a tide of explorations of the future tense in media studies (see for example Andrejevic 2019, Hong and Szpunar 2019, Zylinska 2020, Pentzold, et al 2020), to which I also hope to contribute.

AI is *anticipatory media* in several senses. The phenomena we call AI seem to be, both as a set of media technologies and an analytic phenomenon, essentially *about anticipation*. They materially and symbolically foresee and thereby bring a world into being. AI forecasting, modelling, prediction, and prognosis advises, predicts, if not always outright decides, “about how data should be interpreted and what actions should be taken as a result” (Mittelstadt et al 2016, n.p.). As Christian Pentzold (et al) recently put it: “Digital media, networked services and aggregated data are beacons of the future” (2020, p. 2). Hence, they “do not only forecast uncharted times or predict what comes next,” they are, it seems, “both prognostic and progressive media: they don’t await the times to come but realize the utopian as well as dystopian visions which they have always already foreseen” (ibid, p. 7). AI thus co-creates the future in predicting it.

Coupled with the ideology of dataism, such aptitudes of AI thereby seemingly assume metaphysical, magical or even divinatory capacities to foresee the future (van Dijck 2014, Chun 2016, Esposito 2018). As Joanna Zylinska maintains, these technological imaginaries also belong to a narrative with a gendered tenor of “messianic-apocalyptic undertones” and “masculinist-solutionist ambitions” (2018, p. 15). Hence, the advent of this technology is in the guise of anticipatory media that may *salvage* us. This furthermore feeds into Jane Guyer’s analysis of contemporary temporalities (2007, 2019) in which the *near future* – a social and material world that we could previously imagine, plan, hope for and intelligibly try to shape and realize – has disappeared. This has been replaced by the combination of an absolute sense of *the next moment* – a punctuated time of rigid calendrics and dates modelled upon the finance sector – with *the long-term*, widely touted both in the myths of macroeconomics of eternal progress, and in evangelical ideas of prophetic time. AI thus arrives on the empty horizon of

the future, and both fills up that next moment with datafied answers, and fulfills the expectation of an arrival; a salvation at the end times. In fact, the notion of *the next century with AI* is itself downright illustrative of this hybrid temporal modality of the 'next' and the 'infinite'.

This form of future orientation goes in the field of anticipation studies under the name of *forecasting* (Poli 2017, p. 67). Forecasting focuses on capturing continuity through quantitative models and “is the properly predictive component of futures study. Its models tend to adopt either a very short – as with econometric models – or a very long – as with climate change models – temporal window” (ibid); hence a combination of the next and the infinite. As already noted, Barbara Adam and Chris Groves distinguish between two types of futures: *abstract* and *concrete futures*. “Abstract futures [...] correspond to forecasting extrapolations, or more generally to system dynamics modelling in which the future is seen as a projection and a product of the past” (Poli 2017, p. 34). Such “*present futures*” are “imagined, planned, projected, and produced *in and for the present*” (Adam and Groves 2007, p. 28, italics in original). These are for example economic and scientific forecasts that colonize the future from the present through derivatory models of exploiting the future for gain (Miller 2007, Halpern 2018). As discussed above, Zuboff has pinpointed the latest and most pervasive of all such exploits of the future through forecasting. In this diagnosis, the future has thus returned, via anticipatory media, which seem to have kidnapped it at once.

To theoretically and imaginatively propose existentialist openings, one must first possess a more fine-grained concept of anticipation. The field of anticipation studies further distinguishes between *forecast*, *foresight* and *anticipation* (Poli 2017, p. 67). While forecasting implies prediction and calculus, *foresighting*, by contrast, is not predictive. It produces a variety of possible futures to challenge the mindset of decision makers. It is qualitative and focuses instead on discontinuities. *Anticipation*, in turn, involves both a future oriented attitude and using the knowledge one has gained from that attitude to plan and act accordingly (ibid, p. 35). Hence, a system behaving in an anticipatory manner takes decisions in the present according to anticipations about something that may occur in the future.⁴ Using the future is in fact the very meaning of ‘anticipatory behavior’. It seems then that AI is anticipatory if this is the main qualifying characteristic.⁵

⁴ The field of anticipation studies thus furthermore differentiates between *anticipation* and *anticipatory system*. An anticipatory system is defined as a system “containing a predictive model of itself and/or its environment which allows the system to change state at one instant in accord with the model’s predictions pertaining to a later instant” (Rosen 1985/2012 in Poli 2017, p. 2).

⁵ As argued by Rovatsos, AI displays in line with Poli’s analysis “elements of an anticipatory process: A model of the system is used to consider different alternatives about

Yet, anticipation also shares some features with foresight: it is non-predictive, qualitative, complex and focused on discontinuity and uncertainty. Hence *anticipation proper* also has an impredicative nature. Roberto Poli traces this to for example aspects of biology and society that fail, or refuse, to be reduced to quantification. For example, within the study of autopoietic systems and within relational biology, there is an acknowledgement that all the dynamic processes within an organism are self-referential and mutually linked. Poli explains: “The thesis of impredicativity has wide consequences, one of the most important being that all the information describing an organism will never be completely captured by any algorithmic (i.e. mechanistic) model” (ibid, p. 19). In discussing anthropological perspectives on anticipation, he concludes that theological reflections on the future are, perhaps surprisingly, “in perfect accord with the theory of complex and impredicative systems” (ibid, p. 28). The exegetic tradition thus similarly concludes that:

The real future is ‘uncertain’ and is not just the unfolding of our present ideas or strategies. It is not simply a calculated human creation involving ‘plans plus time.’ Rather the open future that comes to meet us brings surprises. That unforeseen future requires provisionality, since it cannot be calculated or controlled. (Prusak cited in Poli 2017, ibid)

Hence, by these criteria ‘anticipatory AI’ would in fact flunk to be an example of anticipation proper which shares qualities with the limit situation – in particular that of *uncertainty*.

5 UNCERTAINTY: THE NECESSARY HABITAT OF THE LIVED FUTURE PRESENT

With support from anticipation studies, we can actually establish that the real future is uncertain thus containing uncontrollable and incalculable openness. There is something liberatory about straightforwardly proclaiming that the future is existential in this way.⁶ The anticipatory dynamic itself – understood in terms of the above-discussed features of anticipation proper, which includes the capacity to keep futures radically open – is thus integral to the limit situation. And concomitantly, as

what might occur in the future and makes decisions about what action to take in the present. And, the future is seen as a projection of the past through the present” (2019, p. 1508).

⁶ As we have seen, the future itself has an open-ended, ambivalent and deeply existential quality. Indeed, the ambivalence of the future is profoundly true both when it is sought through a forward-looking attitude (in a practical lived sense, in a latent future in the making), and when it is pursued as project and projection (as a plannable, pre-given and ‘abstract future’).

coexists we are in fact beings of deep uncertainty assigned to navigate, anticipate and thereby pursue a lived future in attending to what is called upon us within the limits of the present: within the digital limit situation. We are thus inevitably involved in what Adam and Groves call the latent future: our dealings and doings, our media practices and projects, our designing and deliberating – including careful academic and philosophical thinking in and about the present age – all in fact constitute *futures present* why they are of import and of consequence.

Jaspers' philosophy delves into both presentness and uncertainty in creative ways, since it sits on the limits of the known and the controllable. His approach allows us to recognize that carefully attending to the present situation constitutes the core of what makes us human. And thus, possibly the core of realizing a sustainable, concrete future with media. In the concluding chapter of *The Perennial Scope of Philosophy* entitled "The Philosophy of the Future" Jaspers offers an understanding of truth in time, as belonging ultimately to the present:

But is life for the future the essential import of our work? I do not believe so. For we serve the future only in so far as we realize the present. We must not expect the authentic only from the future. Even though this presentness cannot in fact attain to durable consummation, in which I can rest and endure in time, it is nevertheless possible in penetrating this actuality to penetrate in a sense the eternal present in its temporal manifestation. The actuality of the truth in time is, to be sure, as impossible to capture as an optical image, – but it is always with us. (1949, p. 157)

He argues that a philosophy of the future must be able to take hold of the riches and possibilities of the present, in which we can realize ourselves as what he calls living *Existenz* with other *Existenz*. In asserting similarly a future present, Chris Groves echoes Jaspers in insisting on a concrete, embedded, relational and existential future: "What presence does the future have, here and now, and in what way does our relation to it affect our wellbeing and capacity for flourishing? Not any specific future, but the future as an existential dimension of our relationship to others, to ourselves and to the world" (Groves forthcoming, n.p.).

This emphasis on the future present thus resonates with the limit situation, which if seized authentically and sincerely, can be a site for opening new futures. Importantly for my argument in the following, the human limit situation is indeterminate and never fully surveyable. Uncertainty is thus key. Shoshana Zuboff relies on Hanna Arendt's concept of will as "the organ for the future". "The power of will", Zuboff argues following Arendt, lies in "its unique ability to deal with things",

'visibles and invisibles' that have never existed at all. Just as the past always presents itself to the mind in the guise of certainty, *the future's main*

characteristic is its basic uncertainty, no matter how high degree of probability a prediction may attain. (Arendt 1978, cited in Zuboff *ibid*, p. 329-330, italics added)

As Zuboff maintains, the most foundational aspects of human existence are today embezzled by surveillance capitalism, with the ultimate goal to combat ‘chaos’. But, as she acknowledges, “uncertainty is not chaos but rather *the necessary habitat of the present tense...*” (2019, p. 336, italics added).

In the existentialist tradition freedom and necessity/finitude – corresponding to uncertainty and situatedness, openness and limits (see de Beauvoir 1946, cf. Withy 2011) – are fundamental and irreducibly interdependent dimensions of human existence. Uncertainty and unhomeliness (as much as freedom) thus belong to the human condition itself. They can also, by contrast, be seen as a dimension of contemporary and historically specific times of political, ecological, epidemiological and technological crises with asymmetrical consequences for those affected (cf. Akama et al, 2018, p. 19). Guyer ponders similarly:

One could perhaps reduce all this to an ahistorical ‘life in uncertain times’ or an ancient philosophy of risk ‘taken on the flood’ (to quote Cassius in Shakespeare’s Julius Caesar). There is, however, a *historical specificity to uncertainty now*. It is an emerging chronotope ... honed into technologies that can deliberately unsettle and create arbitrage opportunities and gridlocks as well as logistical feats of extraordinary precision and power. (Guyer 2007, p. 418, italics added)

The latter reflects Zuboff’s prediction imperative, and it describes the quest for complete certainty within surveillance capitalism. In Zuboff’s own words, which again brings what I call the digital limit situation to mind:

I suggest that we now face a moment in history when the elemental right to the future tense is endangered by a panvasive digital architecture of behavior modification owned and operated by surveillance capital, necessitated by its economic imperatives, and driven by its laws of motion, all for the sake of its guaranteed outcomes. (2019, p. 331)

AI as anticipatory media in this reading, will offer nothing but guaranteed prediction, and in blackboxing its own workings, surveillance capitalism may further increase uncertainty (*ibid*, pp. 342-343).

I see uncertainty as a perennial dimension, belonging to the human condition – to being itself – even as we are simultaneously situated differently in political and social terms, which deeply affect our lives. The technologically enforced lifeworld may however usher in heightened uncertainties, vulnerabilities and existential anxieties (Lagerkvist 2016, 2019, see also Adam and Groves 2007, p. 55). I thus combine conceiving of uncertainty as a given and as contextually dependent, and of vulnerability

as ontological and social (MacKenzie et al 2014) and in effect as socio-technological at the same time. In line with how a number of scholars are today arguing for embracing uncertainty, I hold that it should be subjected to new forms of post-disciplinary scrutiny (Akama et al 2018, Halpern 2018, Guyer 2019). This move is necessary to take on, both conceptually and practically, if we aim to contribute to not only how we understand the future with media, but to how we actually intervene imaginatively in its making.

6 COMPLICATING MATTERS AND METHODS OF HOPE

How do we dissolve the spell of the horizons of the ‘new AI era’ and bring about alternatives? How do we act and “think what we are doing” (Arendt 1958, p. 5) in the present moment? By pausing (which is in the very nature of the limit situation!) we will note a cluster of complicating matters. First, in a disturbing manner the aforementioned colonization of anticipation for profit, also applies to the ‘uncertainties’ of being. Jane Guyer illustrates how the language of ‘brinks’ and ‘adventures’, ‘emergencies’ and ‘indeterminacies’, have filled the evacuated near future, both in popular and formal discourse as well as in economic thinking and academic debate (Guyer 2016). And in ‘the present moment’ the limit situation seems apprehended in AI projects such as “AI for Earth” or “AI for Good” at Microsoft,⁷ or in the technologies launched for tracking contagion during the current Covid-19 crisis (Klein 2020). It is not far-fetched to suggest that the tech agents are seizing their opportunity. Boosted by a righteous project framed within well-meaning goals and benign intentions of salvaging the planet and the species, they are operating through the logic of surveillance capitalism at the same time and take their imperatives of mining the depths of our lives even farther. The digital-human limit situation is ultimately in the hands of very powerful agents, with a gargantuan apparatus of rhetorical and infrastructural means at their disposal.

Hence it seems that it is not enough to reclaim the future tense; it is also urgent to lay claims anew to the very limit situation itself and meticulously ruminate on its meanings and stakes. This implies an awakening. As Jaspers puts it: “Awaking to myself, in my situation, I raised the question of being” (1932/1969, p. 45). In fact for Jaspers: “[p]hilosophizing starts with *our situation*” (ibid, p 43, italics added). This means to raise the most profound philosophical questions – together – in search for new light ahead: What is the meaning of our technologized existence? How do we wish to live our lives together on the planet with machines? How can we diversify AI-driven lifeworlds? Can ‘autonomous

⁷<https://www.microsoft.com/en-us/ai/ai-for-good>

systems' be subject to a democratic screening, a vetting, so as to guarantee a bedrock of non-negotiable goals – perhaps justice, equity, sustainability, non-violence⁸. And how does automation entangled with human needs and necessities change our 'situation'? How can these technologies be harnessed for realizing an existentially and environmentally sustainable and *concrete* future which is “embedded, embodied and contextual” (Adam and Groves 2007, p. 11)? Could they in fact be “technologies of the imagination” (Sneath et al 2009) that generate something beyond the ethos of surveillance capitalists?

Time has come, as many seem to agree ‘in this moment’ to re-center concerns and agendas and to in fact reclaim a more utopian future. In this spirit, Joanna Zylińska follows Franco ‘Bifo’ Berardi in raising the questions about whether our future has already been expended or whether it can still be redeemed. Drawing on his idea there is a multiplicity of immanent possible futures (Berardi 2017) and invoking something close to what I call the digital limit situation, Zylińska argues:

The present moment, with its ecological and economic destructions, and the material and discursive havoc wreaked upon our planet, seems to suggest humanity is on a downward trajectory, that it has already ordered in its own expiration. Yet, contrary to the predictions of the various fetishists of the apocalypse, I want to follow Bifo in arguing that our shared future has not yet been totally spent, irrevocably conquered or deterministically designed. And so, amidst the ruin of our current political thought, a possibility of another, more utopian, future can perhaps be sought and fought for. (2020, p. 148)

Enter *hope*, which is importantly not a thing, a possession: it is a “method for self-knowledge” (Miyazaki 2004, p. 139), allowing for a re-orientation of oneself and of knowledge toward the future (cf. Kavedzija 2016, p. 4). The method, used by the disenfranchised Suvavou people, resonates with the

⁸ Indeed, this is already an ongoing endeavor as for example when “The New AI Alliance” is inviting the citizens of Europe into a dialogue on AI applications and ethics. As they put it in their mission statement: “To lay the foundations of responsible development, this platform will host a dialogue on the principles that should govern our technological future and on their practical implementation. A High-level Expert group nominated by the European Commission will engage the members of the Alliance in the discussion. [...] I would like to invite you to reflect on what the future holds for all of us and how we can best prepare for it. Let us use the European AI Alliance to shape our digital future together. I hope you will take this opportunity to actively participate in the debate!” (Lucilla Scollari, The New AI Alliance, EU, June 13, 2018). The intention in this essay is to argue for the need to begin this discussion in an existentialist manner, beyond instrumentarian deadlocks and technocratic assumptions, and in deep acknowledgement of the fact that how we define human existence affects how we may take on our task to care for the future present.

limit situation: “the moment of hope that emerged at the moment of abeyance of agency was, then, simultaneously open and closed” (Miyazaki 2004, p. 106). Similarly, seizing the limit situation “allows for the possibility of an uncertain future” (Jaspers 1932/1970, pp. 183-184). Uncertainty is, as already discussed, the flip side of existential freedom: “The unrest in this boundary situation is that what is up to me lies still ahead” (ibid). In full recognition of both limits, suffering and exposure in the limit situation, Jaspers still argues that “[it] is possible for a more profound serenity to rest on grounds of inextinguishable pain” (ibid, p. 195). Uncertainty may thus be generative (cf. Akama et al 2018, p. 45).

In ways that echo these insights, and much in line with how I read Jaspers, Marianne Hirsch launches the notion of *vulnerable time*, to ultimately argue that “unlike trauma, vulnerability shapes an open-ended temporality – that of the threshold of an alternate, reimagined reality” (Hirsch 2016, p. 80). I hold that digital-human vulnerability is situated on this very threshold – and that it can produce self-knowledge for networked humanity. As a method of hope, Zuboff is in favor of replacing the abstract future of the surveillance capitalists, with a plan of her own for third modernity humans. She suggests that instead of an individualistic framework of counter-declarations of hiding from the networks, we need synthetic declarations involving civil society, collective action and legislation (2019, p. 344). We must will to will together! Zuboff is terrified of the companies taking their ‘responsibility,’ as this consequentially becomes part of their logic for extraction and prediction. Zylinska also argues against the CSR of ‘ethical AI’ which she sees as a way for companies to try and suspend, and ward off, policy intervention (2020, pp. 34-35). Mark Andrejevic sees risks in offloading human agency and judgement to machines and wants us to move beyond the “ethical turn” and replace it with “data civics” (2020). The emphasis should thus be placed on a veteran method of hope: the modernist form of near-future planning which should imply regulating politically and legally the leeway, scope and scale of the current tech giants, and thereby controlling their development of AI in the service of humanity. We may note that by similar token for Jaspers, the general situatedness of human life encompasses change within, it is in essence transformable (Jaspers 1932/1970, p. 178). From this perspective even a future seemingly encapsulated by prediction technologies belongs to this quality of the situation:

I have to put up with them as given, but not as definitely given: there remains a chance of transforming them, even in the sense that I can calculate and bring about situations, in which I am going to act as given henceforth. This is the character of purposive arrangements. In technological, legal, political action *we create situations*: We do not proceed directly toward a goal, we bring about the situation from which it will arise. (ibid, italics in original)

For Jaspers, in his relentlessly hopeful manner, these modernist plans thus also contain openings. An alternative to ‘the New AI Era’ would be to envision regulated and controllable AI in the hands of human collectives as aids in the mundane and deeply existential projects of sustaining relationships to each other and to our planet. In order to bring about a century of care and attendance, as Jaspers would probably suggest in his insistence upon limits, the wise thing would be to sometimes pursue the option of automation, sometimes not. Indeed, there may be no-go zones for AI, not because the solutions do not yet exist, but because we value something else. Only with a foothold firmly in the soil of deep realization of the human situation; in the earthbound knowledge of the stuff we are made of and of our perennial needs and necessities, can the horizons of AI become a deeply human- and planet-centered endeavor (cf. Arendt 1958).

The endeavors to politically steer and plan must be combined with other methods of hope, such as a focus on *the human imagination*. The future demands a role for the imagination. Hence imagination and creativity are crucial for achieving an alternative that makes a difference. Jaspers explains the pivotal role of the imagination for transformation:

It is precisely when they explain nothing and are meaningless, by the criteria of rational consequence, causality and end that myth and fairy tale can have great depth and infinite interpretability. [...] *Only the language of imagination* – so it seems – touches reality that evades all objective investigation. (1937/1995, p. 83, italics in original)

Zylinska proposes, in addition, that: “[t]his possibility of envisaging a different future and painting a different picture of the world may require us to extend an invitation to nonhuman others to join the project and help redraft its aesthetic boundaries” (2020, p. 148). In order to embrace such alien epistemologies we may – in addition to turning to the ‘other-than-human’ realm – also embark into the neglected and alien depths of the terrains of *Existenz*. The limit situation is the long-lost relative who should be reunited with the family of human imagination, play, creativity, and aesthetic sensibility. In fact, embracing the imaginary as part of our existential practices, means to invoke the radical *openness* of the limit situation and thus to simultaneously move *beyond even that which we can imagine* (Berardi 2017). Here, the limit situation offers up a possibility to capture a neglected potentiality of being human, an alterity within our register. Hence, the alternative often sought in animals and machines, is an ultimate otherness that can also be found at the heart of what matters to us, and in our very acts of rebelliously imagining and carefully attending. Acts that evade objectivism and that may allow for a creative broadening of both the human register and our anticipatory modes and media, beyond the instrumental, logical, controlled, autonomous, certain – and in effect

predicted and absolutely predictable – idea of the Human, and His Future with AI in ‘the New Era’.

7 CONCLUSION

This essay set out by discussing how AI succeeds in presenting itself as that earth-shattering arrival on the human horizon at the end times, reflecting a temporal hybrid of the next and the infinite in which some forms of religious and macroeconomic discourse share a stake. This, as Shoshana Zuboff has demonstrated, includes a looting of the depths of human experience to envelope humanity’s existential concerns for profit. In addition, AI entrepreneurs are in the time of writing aiming to benefit from the non-surveyable and as some would argue, interlinked crises of our present age, attempting to fill also that empty, uncertain future of the next moment with ‘inevitable’ datafication. One could even argue that AI imaginaries are rummaging the brinks of a destructive form of life that they simultaneously reproduce; an economic and political order that according to Adam and Groves “encourages us to fly blindly forward into the future, trusting in the protection of forecast and scientific prediction” (2011, p. 18). In other words, in an era of multiple crises, AI imaginaries – contrary to what they proclaim – continue the routine to effectively institutionalize irresponsibility, as they are “exploiting the future in the narrow interests of the present” (ibid). Presenting themselves as the only set of solutions to problems that face us on the fringes of our late modern societal order of disintegration – while operating through forecasting, prediction and precision – they thus effectively close the very horizon of the future at the same time.

An important objective has thus also been to offer an invitation beyond the prospects and limits of ‘the new AI Era’ of predictive modelling, exploitation and dataism. The invitation goes: let’s collaboratively imagine and craft a future of existentially sustainable media. Let’s pause in the present to reflect on and thus engage the future, and indeed zealously *philosophize* in the spirit of Jaspers in order to bring something else, something new, into being. Let’s seek out methods of hope, beginning with the act of embracing the present moment – the digital limit situation – as a *task*. And let’s pick up the torch from the *Futures Anthropologies Manifesto* for example and “probe, interrogate and play with futures that are plural, non-linear, cyclical, implausible and always unraveling” (2017, n.p.).

Precisely here lies the assignment ahead for pursuing a post-disciplinary, integrative and generative form of Humanities and Social Sciences as a method of hope, that engages AI researchers in a pursuit of designing for the benefit of an inclusive and open future of existential and ecological sustainability. Thus bridging ‘the two cultures’ means, I suggest,

exploring an existential ethics in collaboration with those who engineer the systems, in the joint existential practice of imagining the future at the limits of what can be imagined. The digital limit situation means a chance of opening up the present to other possibilities (Bifo 2017 p. 232) than those visible, embedded, forecasted, or scientifically conceivable: to the indeterminate, open-ended, or to the completely unbelievable. As Bifo suggests, for example, the implausible scenario of a worldwide politico-ethical awakening of all the cognitive workers of the world: designers, programmers, AI engineers who control the developments – that is where a new future may begin to take shape.

It seems clear that being able to anticipate Jane Guyer's 'near future' is phenomenologically required for our common life and wellbeing, and for existential sustainability in a life of and with environmental media technologies (Peters 2015). The only way to achieve it is through a combination of plans, policies, imaginings, dreams and practices of care in the present. Thus, we need a blend of particular abstractions and carefully crafted concrete and lived futures, with AI at our voluntary disposal (!). This will imply attending and tenderly tending to, and caring for, the future in the present; practically forging a common culture (a latent future) and imaginatively producing progressive plans at the same time. In the words of Jaspers, who believes artistic ciphers can be our prod:

Only by *attending to the ciphers of being*, can one perceive this indubitable reality; it is as if in the act of attending a transformation occurs: not only into transparency, but into the ungrounded necessity that is no longer the opposite of possibility. (1937/1995 p. 83, italics in original)

Hence, the act of *attending* is key, and this is a method of hope that will open up unforeseen possibilities. I have suggested that if we read Jaspers philosophy carefully and inventively it engenders a way to think both creatively and critically about the 'life-apparatus' of AI and autonomous systems. Pitting them against the properties of existential media enables us to ask when and how they can or cannot afford anticipation proper. I have revisited his writings on the most profound human experiences of all: the limit situations of life, where insight can be gained about what makes us human in moments of utter uncertainty and contingency, and I have sought to bring them into a conversation with our contemporary technologized culture. I chose this path not only because such profundity is in fact heavily enmeshed in the digital in a variety of ways in digital existence (cf. Lagerkvist 2019). A focus on the concept of the digital limit situation may push toward reconceiving of technology in light of a multifocal sense of *limits* – in terms of brinks, thresholds, restrictions, margins – rather than endless progress. Finally, if we reconceive of media as existential, and of existential media as anticipatory, this will complement Zuboff's ultimate

remedy: reclaiming will. The existential palette is broader and more nuanced. For one thing, even as we reclaim the future tense, by our will to will, we can never be sure of the upshot. Because, in fact, in all lived-in practices “multiple dynamics interact in indeterminate ways” (Guyer 2019, p. 377). Or in Jaspers’ words:

Nobody knows where man (sic!) and his thinking are going. Since existence, man and his world are not at an end, a completed philosophy is as little possible as an anticipation of the whole. We men have plans with finite ends, but something else always comes out which no one willed. (Jaspers 1935/1997, p. 48)

Thankfully. For coexists in their historic moment, within the confines and potentials of their technologized situation, the horizon is thus ultimately still open, impredicative and as such anticipatory. Here await fundamental, abysmal, magnificent and enormous tasks for each an everyone of us (cf. Kierkegaard 1843). And for (digital) humans “the future is not just a technical and neutral space, it is shot through with affect and sensation” and it produces “awe, vertigo, excitement, disorientation” (Appadurai 2013, pp. 286-287). In our collective and diversified digital limit situation – in itself co-constituted by technologically mediated crises, offering both limitations, contingencies and possibilities – the future also deeply matters to us. And where anticipation proper musters openness and indeterminacy, existentiality will interrupt them in deep acknowledgement also of limits. In the present moment such uncertainties as well as limits in fact carry, in their inherent inconclusiveness, a hope within.

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