

The Allure and Impossibility of an Algorithmic Future: A Lesson from Patočka's Supercivilisation

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Abstract

Our experience of the present is defined by numbers, graphs and, increasingly, an algorithmically calculated future, based on the mathematical and formal reasoning that began with the rise of modern science in the 16th and 17th centuries. Today, this reasoning is further modified and extended in the form of computer-executed, algorithmic reasoning. Instead of fallible human reasoning, algorithms – based on mining databases for ‘information’ – are seen to provide more efficient processes, offering fast solutions. In this paper, then, I will follow Jan Patočka, who suggests that we live in an age of supercivilisation, one in which human reasoning has become self-sufficient, ceasing to depend on the supernatural or cultural traditions that previously guided human lives. My argument is that Patočka’s analysis of supercivilisation can open up a different way to reflect on the ‘spiritual foundation of our times’. As Patočka says, to reflect on our situation does not mean that we can change it, but reflection can give us a new understanding that will open up different ways to think about it.

Keywords

Jan Patočka, Supercivilisation, Death of God, High-Tech, Algorithms, Big Data, Formalisation

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A rationalisation process based on old civilizations creates something new. We can see this in the process of disintegration of the Christian civilization from which our modern one was born while gradually consuming it and creating a new society (Patočka 1996c: 249).¹

Introduction

Our experience of the present is defined by numbers, graphs, and, increasingly, an algorithmically calculated future. These processes are based on mathematical and formal reasoning, which began with the rise of modern science in the 16th and 17th centuries and is today modified and extended in the form of computer-executed algorithmic reasoning. This algorithmic reasoning has penetrated every area of our lives, including social media, advertising, geographical orientation in space, shopping, dating, education, health and government, forming the basis of our interactions with every aspect of the world. These algorithmic processes eliminate human agency from both day-to-day and life-affecting decision-making, thereby disallowing humans from defining the future for themselves. Instead of fallible human reasoning, the algorithms – based on mining databases for ‘information’ – are seen to provide more efficient processes, offering fast solutions.

In this paper, then, I will presuppose our present preoccupation with the dream of technological solutionism² – the belief that all *human* problems can be solved by super-rational, super-fast technology – to argue that Jan Patočka's 1950s essay, “Supercivilisation and its Inner Conflict [*Nadcivilizace a její vnitřní konflikt*]” (1996c) – can open a different way to reflect on the ‘spiritual foundation of our times’ in order to understand the present. I propose that high-tech companies, defining every aspect of our present, are the most resourceful inheritors and successors of formal rationality. The new algorithmic processes turn out to be a *reductio ad absurdum* of modern mathematical and formalised reasoning. Today, *technologically* driven reasoning has reduced the human future to an algorithmically harvested field of correlations drawn from a big data pool, which Patočka uncannily foresaw in his essay.

My claim is that Patočka's description of ‘rational supercivilisation’ in its ‘radical’ version defines our present. As he also notes, to moderate supercivilisation “belongs probably still a great variety, diversity, a rich web of interests; a relation to nature, to art, rich emotional relations et cetera”. However, the supercivilisational “principle... which is ratio... suppresses more and more the fabric of [various] interests, installing in the place of the rich, the simple; in the place of the subtle, the gross; and in the place of the fine, the garish” (Patočka 1996c: 267). In the end, the present “development would go further towards radicalism” (267).

According to Patočka, rational civilisation (supercivilisation) dismantled the old civilisations, which were defined by two interpenetrating spheres – human and divine. Their vertical universalisation – combining human and divine world order – could only be particular. Each civilisational order is fortified by different transcendental realms, hence thwarting all attempts to universalise other civilisations under one order and preventing world ‘conquest’ by one civilisation. By contrast, rational civilisation aims to create a horizontal order – based on formalised reasoning, independent of divinity and therefore dispensing with diverse divine orders – levelling everything to one formal system. The supercivilisation aims to conquer and transform high civilisations with their “emotional core of life” (Patočka 1996c: 247). As Patočka notes, this process “has been discussed by sociologists and historians as a process of secularisation”. Secularisation is a process, emanating from formalised reasoning, that eliminates the particularism of vertical civilisations and limits their

¹ Translations are by the author, unless otherwise attributed.

² See, for example, Morozov (2014).

expansion because of “a certain inadequacy and incompleteness”. The previous “high civilisations” could *not* achieve “universality” outside of their own sphere (247). Suppressing transcendental powers by creating the rule of formalised rationality, the ascending supercivilisation creates something new. As Patočka stresses, the Christian civilization gave birth to our modern one, which first coexisted with it, then gradually consumed it (249).

In this present supercivilisation, God, the guarantor of vertical order is dead and, despite many claims to the contrary, formal rationality is our way of living. Although Patočka defines *radical* supercivilisation by the attribute of ‘massification’, I suggest that today’s conception of people as individualised, atomistic, self-contained human innovators aligns with his analysis of a radical drive to conceive society as an indistinguishable mass. Hence, extending Patočka’s analysis, I claim that the recent, increasingly digitised quantification of all aspects of our lives, which has changed the landscape of our understanding, is the radical supercivilisation, in which humans become “a mere accounting unit, like cattle, or – and it amounts to the same – as a pure abstraction” (Supiot 2007: x).

Patočka’s essay is divided into three parts, which could be roughly described as: Part I: Phenomenological inquiry into the structure of supercivilisation, starting from Arnold J. Toynbee’s *A Study of History* (sections I–IV)³; Part II: Phenomenological history of Europe (sections V–IX); and Part III: Ontological questions concerning truth (sections X–XI). In this paper, I will mostly draw on Part I, with some concluding remarks from Part III.

Preamble

The increasing intellectualization and rationalization does not... indicate an increased and general knowledge of the conditions under which one lives.

It means... that there are no mysterious incalculable forces that come into play, but rather that one can, in principle, master all things by calculation. This means that the world is disenchanted. ... Technical means and calculations perform the service (Weber 1946: 139).

Already in the 1950s, a long time before high-tech companies colonised our lives in all domains of living, Patočka reflected on the way our civilisation had become a ‘supercivilisation’, with all human meaning reduced to formalised reasoning. His reflection proceeds from Toynbee’s *A Study of History*. As Toynbee claims, a “civilization may emerge through the spontaneous mutation of some pre-civilizational society” (Toynbee 1972: 85). In Toynbee’s analysis, “a new civilization is generated through the transition of a society from a static condition to a dynamic activity” (1972: 87).

Patočka starts with Toynbee’s analysis of “primitive agricultural societies” and their transition to “the higher level that we call ‘civilization’” (Toynbee 1972: 52). As he notes, Toynbee himself does not privilege any particular form of modern civilization; rather, he compares them to each other (Patočka 1996c: 247), due, according to Patočka, to Toynbee’s claim that no previous civilisation managed to be universal, although all aspired to become so. Patočka extends Toynbee’s analysis to claim that this drive towards ‘universalisation’ terminated with our own civilisation, which has left behind all ‘non-rational elements’. In other words, all remnants of transcendental beings were reduced to formalised rationality only. Formalised rationality was then conceived as the only basis for any and every claim in society; it has become everywhere the universal yardstick for all claims, which can be challenged only from the very same rational system.

³ Originally, the study of universal history was a 12-volume work, published between 1934 and 1961.

According to Patočka, the rise of ‘supercivilisation’⁴ and its dominant, formal *ratio* radically altered the character of civilisation, privileging formal and instrumental, ‘know-how’ rationality, thereby claiming for itself the universalism of horizontal order (1996c: 247–248).

In his analysis, Patočka presents a possible outcome for a new world without the gods or transcendent realms that have previously provided a counterbalance to the present, exclusively human, rational order. In previous civilisations, the answer to ‘why we live in the world’ or a recognition of ‘what is good and what is bad’ was secured by transcendental orders (1996c: 246). Today we frame our lives in terms of *practical* human goals, stripped of divine guidance; the original, non-rational kernel of divinity is eliminated and reduced to calculations (246). We compute the ‘how’ of our lives: how things work around us and how can we achieve our goals, how can we become a part of the larger group or separate from it, how work can define us, how we need to proceed to become more efficient. Our human striving for these human goals is now increasingly executed by algorithmic reasoning, presented as more efficient, time-saving and informed by the most popular choices of others to make our lives simpler and our fallible human reasoning redundant.

This way of thinking is incompatible with previous civilisations and their order of life. As Toynbee notes, there were many ‘primitive’ cultures, defined by unquestioned tradition and magic, and only 21 civilisations that escaped the law of prehistoric orders (Patočka 1996c: 243). As already noted, Patočka expands Toynbee’s analysis, suggesting that we live in an age of supercivilisation, one in which human reasoning has ceased to depend on the supernatural or cultural traditions that previously guided human lives.⁵ This separation of human existence from the divine realm by reducing *human meaning* to rational reckoning has obfuscated human existential worries, which have become ‘homeless’ in the deluge of formalised rationality. In the process, modern science has replaced God’s omniscience with mathematical certitude. Most recently, this rationality has led to the rationalised ordering of humans as its final achievement. Social engineering is an outcome of the radical supercivilisation, which has become dominant in our times (1996c: 261).

The issue for Patočka is not a return to God’s created world – as if it were possible – but the need to rethink human meaning, existence and morality. Formal rationality cannot illuminate these human concerns. We need to think about them independently, without reducing them to the quantifiable logic of formalised thinking or inventing a new divinity.

Patočka’s analysis of the turn from divine order to formalised rationality can also illuminate the current reconfiguration of society defined by the “techniques of governance”, to use Wendy Brown’s term (Brown 2015: 20). In its current form, political rationality – neoliberalism – becomes intertwined with its particularly viral progenies, the Silicon Valley high-tech companies. This new form of governance, based on algorithmic reasoning, is now embedded in every gadget we buy (Wu 2017). The new engineers of human souls,⁶ overwhelmingly represented by the new innovators of information technology companies with their never ending-drive for higher profits and efficiency, define for all of us the dominant spirit of our times. This new spirit is now entangled in its own crisis in the domain of thinking as well as the domain of our everyday living. Jia Tolentino sums it up when she writes that “the crisis in our natural world and the crisis in our minds” are inter-reliant. The destruction of our natural world is now replicated in the sphere of human minds, seized by high-tech companies: “[W]hat has happened to the natural world is happening to us.” Worryingly, “it’s happening on the same soon-to-be-irreparable scale”, because “both [the natural world and the human mind] are

⁴ At the time of his writing, Patočka spoke of two supercivilisations: the USA, which he termed moderate supercivilisation, and the USSR, which he called radical supercivilisation.

⁵ Patočka’s analysis of ‘supercivilisation’ can even be called ‘visionary’ – the term that is usually applied to Michel Foucault’s lecture course on *The Birth of Biopolitics* ((Foucault 2008)). For readings and the influence of Foucault, see Binkley and Capetillo-Ponce (2009); Esposito (2008); Nilsson and Wallenstein (2013).

⁶ Andrey Zhdanov, using Stalin’s definition of writers as “engineers of human souls”, defined the responsibility of a writer or filmmaker as being to represent reality not in “a dead scholastic way, not simply as ‘objective reality,’ but to depict reality in its revolutionary development” (R.S.F.S.R. 1979).

endangered by ‘the logic of capitalist productivity’”(Tolentino 2019), which is also, as Patočka points out, an outcome and product of supercivilisation.

The theory of supercivilisation

Patočka argues that there are two versions of supercivilisation: moderate and radical. In the moderate version, technology rules over nature and over things: “machines, tools, appliances” (1996c: 261). Moderate supercivilisation is extended from modern science and retains its non-totalising qualities when it comes to the rule of people. It refrains from applying a rationalised *telos* to human systems, and it does not aspire to define the totality of human life. It only manages means, never aiming towards a final purpose – the total control of society – based on formal laws. This version of supercivilisation balances and incorporates non-rational remnants of previous civilisations, such as religion, recognising their importance to human life. It tolerates a variety of interests, adjudicating between them to balance all by reason. Reason is not a ruler, only a judge. It is not dogmatic, as it is by necessity in radical supercivilisation. It always keeps its distance from totalising tendencies. Two important aspects define this moderate supercivilisation: scientific truth and the value of human freedom based on the idea of human equality (259–260).

Patočka speaks of three main directions of the supercivilisation: science, economy and society. The universality of scientific reasoning becomes its spiritual direction, while the economic sphere, determined by the global market, is reconfigured on the model of rationalisation, mechanisation and division of labour. The social sphere is transformed by the mechanisation and rationalisation of all social relations. Defined by these three tendencies, the movement towards absolute rationalisation of every sphere of human endeavour is followed with a persistence and perseverance that no other civilisation has known (Patočka 1996c: 248). This new, mechanised idea of the world and society is “animated by a spirit and a mode of knowing wholly different from its predecessors” (Patočka 1996a: 85).

Mathematised science, the foundation of this new civilisation, reformulates humans’ understanding of nature as well as humans’ place in the world: the world becomes a single, physical universe ruled by natural laws. This new, mathematised system of *all* ‘moving bodies’ in geometrical space and time, without hierarchical distinctions, replaces the old metaphysical system (Patočka 1996c: 299). Nature is no longer the creation of an omnipotent God, instead becoming a self-ordered mechanical structure about which science can make predictions through mathematical schema (Patočka 1996a: 116–117). The meaningful human experience of nature is declared unreliable; nature is simply a geometrical manifold without purpose or inner *telos*. The natural, self-running machine is open to scientific investigations and predictions. The lack of a *telos* – with its ultimate, divine meaning of medieval thinking – allows science to search for regularities in natural processes in order to predict future occurrences. Human mastery is extended over all areas of life, including such spheres of human affairs as economics and the world markets, which have also been conceived on the mechanistic model (Patočka 1996c: 248).

This new spirit of “formalizing universality” replaces the qualitative aspects of the world such that quality is transfigured into quantity, privileging “mastery rather than understanding” (Patočka 1996a: 86). The question of the understanding of nature is now limited to the functioning of nature’s system. In the process, the new rationality eliminates everything that it cannot quantify, and this formalising quantification strips nature of all meaning. The only processes open to quantification by the rational method are those of ‘means towards ends’ (Patočka 1996c: 247–248). Hence, instrumental rationality, with its calculative tendencies, is the only rationality left.

Radical supercivilisation

According to Patočka, modern, formalised knowledge “no longer recognizes any [other] models of rationality” (Patočka 1989 [1971]: 228). Formalisation, that successful *method* of modern science, has pervaded our everyday living.⁷

However, as Uwe Poerksen notes, “[i]n its practical application science enlightens, replacing the fantasies that make sense of things with opaque assurances” (Poerksen 1995: 76). The solutionism of modern technology is one of those ‘opaque assurances’. Calculable knowledge replaces human understanding of the world; applications and methods replace human meaning.⁸ Modern knowledge is transformed, first, into effective ‘know-how’ (Patočka 1996c: 247); then into digitised, fractured, information.

Radical supercivilisation accepts only one form of rationality. Its aim is to rule, over “people, individuals and social groups. It is social and political engineering” (Patočka 1996c: 261). The dream of human mastery, which started with Francis Bacon’s vision of ‘know-how’ knowledge, promotes human power over nature. This dream is further affirmed by René Descartes’ vision of humans becoming possessors and masters of nature. Finally, the Enlightenment dream that science will help us to understand society and eliminate wars is relegated to the level of rationality as well. This rationalising dream was fulfilled in the 19th century, when scientific methodology was applied to the study of society. The original dream of human mastery over nature is now recognised as a mastery over society as well.

As Patočka notes, in radical supercivilisation, even science, the pinnacle of human reasoning, is undermined (1996c: 260). This decline of science has only become visible in our times, when privatised science, driven by corporate interests, is left to market ‘forces’ (Oreskes and Conway 2012; Mirowski 2011).

Yet, as Patočka notes, the radical supercivilisation is the result of the tendencies of previous ages. Prior to the victory of supercivilisation, however, in our previous Christian civilisations human calculative tendencies could not become the exclusive principles of ‘reality’, because the world was still enclosed in “the old European, Christian-Ancient-humanist” tradition (Patočka 1999 [1970]: 17). Today, in the world of supercivilisation, formalised reckoning dispenses with all other modes of rationality except absolute rationality. The old European tradition, supported by divinity, is replaced by a rationality that formalises all relations.

This modern understanding of the world and our lives – to treat the method as if it was the world where we live – enforces “the mathematical project of nature deprived of all transcendent support and endowed with meaning only in relation to relative human ends” (Patočka 2015 [1977]: 98). Patočka’s claim now applies also to the domain of high-tech ventures. According to Patočka, the scientific drive and practical ethos “is not accidental but necessary, truly a tragedy” (2015 [1977]: 98). Following the logic of mathematics, we necessarily forget the world in which we live. This necessary tragedy of privileging useful knowledge derived from formalising natural and human relations over our qualitative experience of the world is extended into all domains of human life, which was – until recently – impossible to quantify.

Here, there is a danger. The overall structure of formalised knowledge includes in its architectonics also the confusion proceeding from its magnitude. Humans simply cannot master the entirety of this accumulated knowledge. Its growth proceeds without humans knowing whether and to what extent this knowledge is even unified in its enormity. This human ignorance leads to another problem: a proliferation of more and more experts who cease to understand fields other than their own. This unchecked growth of knowledge and its splintering into various expertises leads to an obliviousness to the true meaning of this accumulated knowledge. After all, in this schema we can understand

⁷ His notion of heretical history and asubjective phenomenology is one of the ways he confronts this quandary. See Chvatík (2017).

⁸ On ‘method’, see Husserl (1970: §9h, 51–52).

knowledge only in its parts, which leads to a plethora of different interpretation of the same by different experts. To master this gigantic knowledge, we proceed to refine each method, which defines its own domain. Methods are now more important than the affairs of the world, becoming esoteric rather than informative. The process goes unchecked, because the practical results are so copious that everything else is left behind. The explosion of formalised methodologies is now becoming part of our everyday living. As Patočka writes, formalised reasoning's sobriety, matter-of-fact rationality and rigour has given us "honest daily bread instead of the spiritual feasts of (often imaginary) old civilisations". Compared to the formalised creativity of science, everything else is receding, especially religion (1996c: 248–250).

The problem of formalisation, as Patočka sees it, is not in the *use* of mathematics but in its impact, refashioning the whole world. Mathematics "does not merely introduce precision into the world but transforms it, rendering it susceptible to mastery in a real, concrete manner", while "focusing its main interest and power on abstract formalization" (1996b: 12). Under the influence of formalisation, reality becomes "itself abstract: what is considered real is whatever corresponds to mathematical relations". Our unpredictable human experience is reduced to "the network of relations or perhaps only the structure of this web of relations" (1996b: 13).

Rationalisation in the present is now relegated to engineers in the high-tech domain, who have become skilled at algorithmic reasoning, turning all human relations and natural processes into a plethora of numbers awash in the ephemeral pools of 'big data'. The conversion of many aspects of our lives into this pool bears witness to the formalisation and economisation of all qualitative aspects of our unpredictable human lives, turning us all into 'product' sold for profit by high-tech companies.

The background to high-tech logic

[M]odelling is not necessarily the truth. It is a way of seeing the world and potentially pointing out how one can influence certain scenarios, but if we knew the truth and could see exactly what was going to happen in the next few months then we don't need to model. We would know the truth (Hurst 2020).

From its beginning, scientific reasoning turned nature into a formal manifold, proceeding step-by-step to restructure human understanding as well. Instead of *seeing* nature as unknowable, threatening and terrifying, the new science proclaimed those views as prejudiced and unscientific. Nature became predictable through the understanding of the formalised relations of natural processes, with an underlying focus on the prediction of 'natural events', which could be *usefully* incorporated into human projects.

Although scientific rationality led to unprecedented success in the sciences as well as unprecedented technological innovations – leading to many appliances that make our lives easier – it also has another, darker side. Once we understand nature as mathematical manifold, our lives become formally separated from it. To be morally responsible for the world we live in is hard to imagine if we speak of nature in terms of triangles and circles, as Galileo did (Galilei 2008: 183), or in terms of forces, energy and motion, as we do now. In our modern imagination, nature is simply a resource for our human projects (Heidegger 1996a; 2002; 2002 [1912]; 2012).

Formalised rationality and its applied practice have led not only to the possibility of the destruction of the world, but also, recently, to the substitution of our autonomy with 'happiness', which social media promote while the space they offer is cluttered with an uncontrolled explosion of information that cannot be turned into knowledge. According to Roberto Simanowski, the defining feature of our networked society is "the disappearance of the present and the loss of reflective perception of both the world and oneself" (Simanowski 2018: xv). Social media eliminate spaces of reflection and contemplation. Instead, they offer the sphere of efficiency to us to access information in the fastest possible way.

Where did we come from? Where are we going?

To study the past is to unlock the prison of the present (Lepore 2018: 5:23).

In 1882, Friedrich Nietzsche's announcement of the death of God – *Gott ist tot* – was a call to reimagine our human time. It was not, of course, the murder of the *meta*-physical God – a god inaccessible to human actions – but an acknowledgement that we no longer have an unconditional faith in God (Nietzsche 2001: §125).⁹ In 1883, Zarathustra muses about the ignorance of the saint in the woods: “Could it be possible! This old saint in his woods has not yet heard the news that *God is dead!*” (2006: §2, 5, italics in original) Nietzsche notes a peculiar connection between faith and science when he writes that “science, too, rests on a faith”. In short, science's claim to objective and rational processes of thinking rests on something that is not accounted for by formal reasoning.¹⁰ In other words, as Nietzsche writes, neither faith nor science are “presuppositionless” (2001: §344, 200).

This is not the first acknowledgment of the problem of faith and knowledge, brought about by the rise of modern science. In 1670 Blaise Pascal already recognised the problematic project of the mechanical nature of modern science. The project of the new science *might* be able to fulfil Francis Bacon's injunction, ‘*scientia potentia est*’ – knowledge is power – by reconfiguring the knowledge of medieval science into the modern, *practical* knowledge of nature. However, in the process, beginning with Galileo, science changed nature created by God – with God's promise of an after-life and his guarantee of morality – into a machine running on its own. Humans can understand this mechanical nature via mathematics, but they cease to be a part of it. As Edwin Arthur Burt observed in 1925, “the whole magnificent movement of modern science” was erected on “basic postulates” of “victorious mechanics” and “the postulate that ultimate causality is to be found in the motion of the physical atoms” (Burt 1925: 16–17).

The idea of *causality*, assuring the ideas of the ‘predictability of nature’ as well as know-how knowledge, was defended by Immanuel Kant in his *First Critique* against the scepticism of David Hume. This fight now seems misguided: for the collectors of big data, with their algorithmic manipulations, the *idea* of causality is replaced by ‘actual’ *correlations*. When the field of data is large enough, algorithms can now ‘spy’ correlations in their ‘searches’ finding patterns that no human can.¹¹ As Chris Anderson puts it: “This is a world where massive amounts of data and applied mathematics replace every other tool” (Anderson 2008).

The problem here is that applied mathematics is now fortified not by causation – antecedent conditions leading to their consequences – but by correlation. After all, “[w]ho knows why people do what they do? The point is they do it, and we can track and measure it with unprecedented fidelity. With enough data, the numbers speak for themselves” (Anderson 2008). As at the beginning of modern *ratio*, ‘measurement’ and ‘numbers’ are primary, but here the *scientific method* is turned on its head. Instead of accepting causation as the primary driver of the ‘scientific’ understanding of nature, in the laboratory of the engineers, using applied mathematics and algorithms, algorithmic formulas ‘trace’ correlations in the amassed data. The patterns excavated by algorithms become the driver of ‘knowledge’.

With the shift from causation to correlation, we have ceased to understand the reasons *why* something happens. To use a simplistic example, we can correlate leaves falling in autumn with birds flying to a warmer climate. There is no need to

⁹ See also Nietzsche (2001: §373; §358).

¹⁰ See Heidegger's discussion in *The Principle of Reason* (1996b).

¹¹ As Byung-Chul Han suggests, the claim is that “the patterns of behavior identified by Big Data's analyses enable accurate prognostication. This, in turn, means that the hypothetical models of theory” are superfluous. After all, we can directly relate various data in the pool to match them according to different patterns that the power of computers helps us to discern, and we can, then, discover significance in them, which we were unable to see previously. “Correlation takes the place of causality. *Why* is an idle question in view of simple fact: *that's how it is*” (Han 2017a: 78, italics in original).

understand the change of seasons, which is the cause of both events: all is as it is – leaves falling and birds flying away happen at the same time. We simply align one set of mathematised data to another to proclaim ‘new’ knowledge’; numbers speak for themselves.

However, as Richard Seymour points out, “numbers never speak for themselves. Every data set requires treatment, processing and interpretation” (Seymour 2019: 157). Moreover, the stress on correlation overlooks a larger theoretical problem that underpins those ‘interpretations’: “a model for extrapolating from correlations established by the sheer bulk of data” does not provide any clue why those correlations were there in the first place. In the end, as he notes, “Big data is no substitute for the scientific method. Far from having the magical cure, the pioneers of data extraction and analysis have contributed to today’s degraded ecologies of information and research” (Seymour 2019: 158). No knowledge is gained from this unknown territory.

God is dead

To understand the turn to ‘mathematisation’ and formalisation of knowledge and, subsequently, of our lives, we need to understand, according to Burt, the “creative period of modern science”, which started “in the seventeenth century”. Only there can we find “the main answer to our problem”: how nature changed through the modern scientific ‘venture’ (Burt 1925: 17).¹² Why was “God who has been...the shepherd” of people’s lives (Genesis 48:15) ‘exchanged’ for formalised reasoning? What kinds of implications ensue from the suppression of vertical high civilisations, ruled by divine order, and their replacement with the horizontal supercivilisation with its formal systematising of all relations? What are the consequences for understanding the ‘nature’ of morality’ and ‘truth’? Since the supercivilisation’s drive to accept only formalised rationality leaves behind questions about good and bad – *bonum* and *malum* – answers become unfathomable. God is relegated to the margin. He is still considered the first architect of this huge mechanical nature, but then he steps aside, as the early natural philosophers theorised.

The gap opened up between the world of science and the lost world of God is also a cause of the alienation of modern individuals, which comes only to the fore in the 20th century. As Simanowski puts it, “It is not, as is often claimed, the social network that separates us from social life; it is the felt lack of a real life that makes the social network so attractive as a ‘respectable’ way out” (Simanowski 2018: 35). Regarding our present technologies, Seymour advances a similar claim when he writes that Twitter can only bring forward what is already the case for many people: “addiction, depression, ‘fake news’, trolls, online mobs, alt-right subcultures – it is only exploiting and magnifying problems that are already socially pervasive” (Seymour 2019: 15). With an empty space where divinity was, formal reasoning is powerless to house our existential worries. Formal reasoning can be used to build these platforms, yet, the formal source of their functioning precludes their ‘outcomes’. They are not built to address human worries. The alienation of humans has been brought about by the supercivilisation, which has reduced all human meaning into numerical sets. Paradoxically, this manipulation is now a domain of those very same social media that have offered a panacea to human loneliness in the first place.

Modern science and modern knowledge are interested in certainty, which is never final; the results are always provisional, while scientists search for more patterns, forces and relations in our models of the universe. However, these models were never intended to be the ultimate answer to humans’ existential worries and moral uncertainties. As Erwin Schrödinger noted, “Whence come I and whither go I? That is the great unfathomable question, the same for every one of us. Science has no answer to it” (Schrödinger 2014: 98). We need to revisit the worries of early thinkers who

¹² Phenomenological thinkers, following Husserl’s and Heidegger’s leads, offer similar analyses. For the early analyses, see Husserl (1970) and Heidegger (2018).

recognised the problem of denying God as a driver of what is to be known without offering a different way to think about the domain of human lives. God offered not only knowledge but also faith in the moral conduct and meaning of life to each of his believers. Without God, morality becomes devoid of the security that God provided; human life becomes a speck of dust in the immensity of the universe. As Patočka notes, “Christianity remains thus far the greatest, unsurpassed” answer to unpredictable human lives, offering a fortification against scepticism and relativism while assisting “humans to struggle against decadence” (1996a: 108).

The challenge of our times is to rethink this divine ‘banister’ erected by humans, while recognising the historical situation of our lives that cannot be addressed by divine omniscience, nor by mathematised, formalised reasoning. There have been many attempts to fill this moral void, but if modern, formalised reasoning is privileged, the only way to proceed is to use what we know in terms of formal mechanics. As Pascal recognises, “philosophers have *constructed* their ethical systems” (1960: no. 292, italics added), yet the knowledge of nature, in Pascal’s words, “will not console me in times of affliction for the lack of moral rules” (1999: III, §57, 14). It is true, as he notes, that the natural law, derived from the “law of cause and effect demonstrates man’s greatness” in the realm of knowledge of nature, yet “the construction of... a fine moral order” is impossible to erect using the law of causality. According to Pascal, without divine intervention and with the inability of science to account for moral actions, the rules of morality must by necessity be “drawn out of concupiscence” (1999: VII, §138, 135).

Thorstein Veblen, in his book, *The Theory of the Leisure Class*, written in 1899, detected a trend in the USA towards “Conspicuous Consumption” (2009 [1899]). However, the full meaning of ‘concupiscence’ as the driver of all human actions becomes visible only today, when apps are designed to satisfy the needs and desires of their users. After all, according to James Bridle, “uncovering and articulating those desires... remains our prerogative” (2018: 16).¹³ Instantaneous gratifications replace meaning of life and moral feeling. What was still important for Kant – “*the starry heavens above me and the moral law within me*” (1999: 269, italics in original) – has changed. Today, as Brown claims, we have converted “every human need or desire into a profitable enterprise” (Brown 2015: 28). Or, to put it in the words of Bridle, the high-tech companies rest “directly upon the frazzled, binge-watching desires of news-saturated consumers” (2018: 130).

In fact, as Pascal also suggests, modern science cannot answer any questions concerning the human condition. Descartes’ new scientific method explains the universe “in terms of mechanistic causes”, whereby “the science of human physiology is the same in kind as the science of stones” (Wilson 2019). For Isaac Newton, the same natural laws explain the *movement* of heavenly bodies, pendulums and an apple falling on his head in terms of the law of gravity in geometrical space and time – but not in human time. As Pascal writes, “The eternal silence of these infinite spaces terrifies me” (1960: no. 392).

In 1790, Kant spells out the problem of *human* morality – the problem of *bonum* and *malum* – without the support of an omnipotent and benevolent God, which Pascal had noted earlier, without fully recognising the fatality of the scientific solution. After fortifying the ground of scientific knowledge in the *First Critique*, Kant realises that epistemic security safeguards the conditions of possibility for mechanical nature but obviates a guide for human moral uncertainties in human time. The Kantian horror – when reflecting on a finite human life – is a realisation of the final consequences for morality in a universe reduced to an efficient, machine. And a reminder of the changed spirit of our times. Kant’s horror that without belief in the immortal soul, nature will toss humans, “just like all the other animals on the earth”, “back

¹³ “Computational systems, as tools, emphasise one of the most powerful aspects of humanity: our ability to act effectively in the world and shape it to our desires. But uncovering and articulating those desires, and ensuring that they do not degrade, overrule, efface, or erase the desires of others, remains our prerogative” (Bridle 2018: 16).

into the abyss of the purposeless chaos of matter from which they were taken” (1987 [1790]: §87, 452 [342]) is not ours. Unlike Kant, we accept that ‘mechanical’ nature makes no moral promises.

The conquest of time and space

The musings of a Belgian monk [Blaise Pascal] 300 years ago on the consequences of believing in God, or not, have influenced our Western life probably more than any other scientific or technological invention (Ross 2004: S7).

Pascal was already aware of the problematic nature of moral promises in a world where God is a god of mathematics only. As he writes, “The God of Christians is not a God who is simply the author of mathematical truths, or of the order of the elements” (Pascal 2016 [1660]: VIII, §556, 110).¹⁴

Living on the threshold, so to speak, of the new, mathematical nature, Pascal became aware of the problems of morality, the meaning of life and truth in a world defined by Descartes’ *res extensa* – nature composed of extended things that we can measure and account for *only* by geometrical thinking.¹⁵ Mathematics became the tool to secure and protect this elusive certainty. Burttt stresses, “the method of correct procedure in philosophy must not rest upon the trustworthiness of sense experience at all”. For Descartes, “thoughts” are “confused” if relying on senses. Hence, we have to “seek the ‘certain principles of material things”, without relying on “the prejudices of the senses”. For Descartes, *only* “the light of reason” can assure us of “great evidence that we cannot doubt...” (Burttt 1925: 108). In clear opposition to Aristotle, who was the pillar of medieval philosophy, Descartes disqualifies the senses as witness to reality.¹⁶ As Burttt makes clear, “*Descartes’ real criterion is not permanence but the possibility of mathematical handling*” (110, italics in original).

The power of numbers has become our certainty. As Pascal writes: “Our soul is thrust into the body, where it finds number, time, dimension. It ponders them and calls them nature, necessity, and can believe nothing else” (1999: XLV, §680, 152). Yet, this turn towards mathematical certainty, as Pascal and Kant recognised, also brought the death of God, accompanied by the ‘end of time’ in any sense other than linear, progressing towards the ultimate victory of humans over nature. Perhaps the decisive result of the death of God is the end of tradition, whereby time has become empty. As Byung-Chul Han suggests, “God functions like a stabilizer of time. He ensures a lasting, perennial present. Thus, God’s death punctuates time itself, deprives it of any theological, teleological, historical tension [*Spannkraft*]” (Han 2017b: 4).

The insistent ‘present’ of the Internet deprives us of our human experience of past and future, and at the same time, this ephemeral present cannot be stabilised. “The present moment shrinks to a fleeting *point* in time, devoid of heirs and free of goals”. No past and no future – we live in the best of possible times, to paraphrase Gottfried Leibniz. “The present no longer trails things past and future along with it” (Han 2017b: 4, italics in original). In other words, our lives are defined by the death of all certainties except those numerical and formal, now also extended to the *mathematically* defined probabilities in the eternal present of the internet.

This way of thinking could only bring one answer, but not the one that Pascal or Kant searched for. “*Eritis sicut dii scientes bonum et malum*”. Here is Pascal: “Each one creates his god, when judging, ‘This is good or bad’; and men mourn or rejoice too much at events” (2016 [1660]: VII, §553, 107). Here is the voice of the serpent prompting Eve to eat the fruit from the forbidden tree of knowledge: “For God knows that in the day you eat of it, your eyes will be

¹⁴ For a different translation and enumerations, see Pascal (1999: XLVII, §690, 172).

¹⁵ “Now the conclusion we should draw from these considerations is not that arithmetic and geometry are the only sciences worth studying, but rather that in seeking the right path of truth we ought to concern ourselves only with objects which admit of as much certainty as the demonstrations of arithmetic and geometry” (Descartes 1985: I, Rule 2, 366 [312–313]).

¹⁶ For today’s views, see Lewis (2013); White (2020).

opened and you will be like God, knowing good and evil” (Gen. 3:5). Here is what Mephistopheles writes in a diary in Johann Wolfgang von Goethe’s *Faust*: “*Eritis sicut dii scientes bonum et malum*” (Goethe 2014: Part I, verse 2045, 2052) – ‘You will be like God, knowing good and evil’. In contrast, in a world where faith is subsumed under the formal reasoning of radical civilisation, as Simanowski suggests, “Faust manages without either God or the devil”. He is no longer “part of an eternal divine order”. Instead of divine order, he is “an actor in social development”. Goethe’s Faust represents “the most radical reaction to Pascal’s *horror vacui*: A defiant activist, he fills the ‘vacant’ space with a social project that can do without God” (Simanowski 2018: 31).

Dostoevsky provides a different answer to the problem of the death of God: we do not need Mephistopheles; we are already gods. This is the answer of Nikolai Stavrogin and Ivan Karamazov (Dostoyevsky 1922; 2004). If God does not exist, we are gods – yet, neither Stavrogin nor Ivan can carry this burden. Nikolai kills himself and Ivan becomes mad. There is another character, in *Demons*, Kirillov, who proclaims that one can become a god only if he kills himself: “It is my duty to shoot myself because the fullest point of my self-will is – for me to kill myself”. Yet, the description given by Dostoevsky certainly does not present the dignity of a future human god. To face one’s death is not easy, if no divine promise is given (1995: 617).

As I have argued, the tension between formalised, mathematical reasoning and human reasoning – especially human responsibility after the death of God – has never been resolved. This tension, this desire not only for the ultimate foundation of knowledge but also for the dream of mastering society, has been replayed many times since the beginning of this turn. The latest garb of ideas – to use Husserl’s fitting description – is algorithmic science.

The master algorithm: the present time

If it exists, the Master Algorithm can derive all knowledge in the world – past, present, and future – from data. Inventing it would be one of the greatest advances in the history of science. It would speed up the progress of knowledge across the board, and change the world in ways that we can barely begin to imagine... a unified theory that makes sense of everything we know to date, and lays the foundation for decades or centuries of future progress (Domingos 2015: viii).¹⁷

Algorithmic science is the clearest expression of humans still holding on to a dream of total mastery of the past, present and future. This is the dream that Pascal, Kant, Goethe, Dostoevsky, Nietzsche and others recognised as the problem opened by the rise of modern science. The supercivilisation was the outcome of the drive to turn all the knowledge of the world into numbers.

Theodore M. Porter explains the power of quantification and numbers and its promise of world-wide communication, irrespective of cultures and traditions. As he writes, “quantification is a technology of distance”. Its global aspiration is its drive, whereby “reliance on numbers and quantitative manipulation minimizes the need for intimate knowledge and personal trust [...] A highly disciplined discourse helps to produce knowledge independent of the particular people who make it” (Porter 1996: ix). This is the motto of radical supercivilisation, as Patočka explained. Finally, it is the dream of a new, formalised God, who can discipline all of us under one formal language, building a new Tower of Babel held together with numbers. Yet a further account betrays this dream, as Porter suggests: “I am reluctant to make science the

¹⁷ “If it exists, the Master Algorithm can derive all knowledge in the world – past, present, and future – from data. Inventing it would be one of the greatest advances in the history of science. It would speed up the progress of knowledge across the board, and change the world in ways that we can barely begin to imagine. The Master Algorithm is to machine learning what the Standard Model is to particle physics or the Central Dogma to molecular biology: a unified theory that makes sense of everything we know to date, and lays the foundation for decades or centuries of future progress. The Master Algorithm is our gateway to solving some of the hardest problems we face, from building domestic robots to curing cancer” (Domingos 2015: viii).

unmoved mover in this drive for objectivity. In science, as in political and administrative affairs, objectivity names a set of strategies for dealing with distance and distrust” (ix).

The problem is not scientific reasoning. Today, we should enforce scientific reasoning; it is the highest achievement of *human* reason. Yet, this reasoning should remain in its domain of the investigation of inanimate nature. Once we extend it into the domain of human affairs, it cannot remain neutral, as Silicon Valley would have it. Through quantification, we create groups, categories, that were not there before we embarked on the numerical understanding of all. The language of transparency, objectivity and neutral models betrays the language of those who have the means and power to categorise.

From the finite, human perspective, the Internet world of unlimited choices offers no choice at all. As is broadly discussed by theorists of the media, Google’s answer to an inquiry is not only limited by the ‘history’ of your previous choices (Pasquale 2015: 9) – known as the ‘filter bubble’ (Pariser 2012), ‘echo chamber’ (Jamieson and Capella 2008) or ‘black box of Big Data’ (Pasquale 2015: 6), depending on the debate – but also by the sheer number of those offers. To predict the future, the engineers of human souls can rely only on past data – which accumulate with the speed of light but are still past, whatever way we understand the past. They cannot access the future, which is always unpredictable. We can pretend that our correlations of past choices can offer glimpses of the future, but this is another dream of technological solutionism.

In the end, the dream of technological solutionism is just that: a dream. We might *believe* Pedro Domingos, when he writes, “The Master Algorithm is our gateway to solving some of the hardest problems we face, from building domestic robots to curing cancer” (Domingos 2015: viii). Eli Pariser nicely sums up the double bind of modern technological solutionism: “For better or worse, programmers and engineers are in a position of remarkable power to shape the future of our society. They can use this power to help solve the big problems of our age – poverty, education, disease – or they can...make a better farting app” (2012: Kindle Locations 2383–2385). The choice between ‘farting apps’ and ‘the big problems of our age’ is a double bind that has underpinned the rise of Silicon Valley.

Conclusion

‘Well... In this brave new world of ours, possibilities and chances are sacrificed to probability. Your future depends more than ever on your past – because your future is assessed on the basis of your past’ (Elsberg 2018: 14).

In the 1950s Patočka wrote a letter to his colleague, Václav Richter (Patočka 2001a: 29). The problems he expressed at that time are still with us. He starts with a personal reflection on his life, only to consider the larger context. He writes that having been forced out of the University, he cannot concentrate on work at all; he has no energy left. His personal existential situation is bad; he might be forced to work in heavy industry. So he sits above the black depths and thinks what he can do. Yet, his personal bleakness is not the worst for him. There is a much bigger context to this bleakness. He has also lost all hope in the future; lost all confidence in the Western world’s ability to maintain *human* society.¹⁸ This is not personal; he reflects on the situation that many are in and on our loss of trust in the future. While working on his study of ‘supercivilisation’ in order to understand why we are in this situation, he attempts also to rethink the concept of history.

¹⁸ Cp J. Patočka, *Nadcivilizace a její vnitřní konflikt*, in: *AS/PD-2*, str. 251–305. – Second printing in: *SS-I/PD-I*, str. 243–302 and (Patočka 1996c).

For Patočka, we need not only to resist formalised rationality, as he suggests in ‘Supercivilisation’, but also to rethink the prevalent concept of history and its obfuscated existential dimension.¹⁹ We need to reflect differently on time and human freedom – not as appendages to history, but as essential conditions for human existence. History cannot be relativised; it is not a totality, and its ‘progress’ is not necessary. No objective laws, no categorisation of the past into discrete, quantified blocks of time and no construction of objective historical processes can tell us anything about human and social decay, about regeneration or the foolishness of past and present situations. Those processes do not reveal the *truth* of historical periods.

On the contrary, for Patočka, thriving and decadence are not conditions of the social order, as if thriving and decadence were next to each other and we could pick which we preferred. They are not formal conditions, but they are a permanent part of human experience and they are always present and together and not in succession. It is we and our acting and thinking that can change the balance of their presence. We can change the balance of these so-called ‘anonymous processes’ because we are not thralls or slaves of ‘social forces’. We cannot know the what and why of our acting. The future is always hidden from us, but historical acts always manifest that there is not a linear way towards it but only our wandering and finding. History is not a process running next to or above us – history is not a dialectic of processes with a predetermined end (even if only ‘visible to the Absolute Spirit’) (Patočka 2001b: 36). Every historical ‘linearity’ that we try to theoretically and formally impose on the plethora of different historical events reveals a dimension of multiple differences that are concurrently present, but only visible after we have acted.

The problem of radical supercivilisation is, as Patočka points out, that “social engineering...the technique of the organisation of objective social forces” is incapable of addressing the crisis in society, because “the question of social decadence...does not coincide with the rational mastery of forces that are available to society”. No social engineering can resolve the crisis, because the crisis is a sign of the problem within this rationality, which has forgotten humans in its design. The present answer can only be from the same system that brought us here – and yet, “the bigger, better the organisation of social power, the greater the tendency to mechanise the whole of life” (Patočka 1996c: 295). The bigger and more convenient the offers from high-tech companies, the more they colonise our human responses, leading to further crisis. This mechanisation, with its concomitant denial of the spiritual, existential aspects of human life, strengthens further “the tendency to decline” (Patočka 1996c: 295). This crisis is the outcome of the impossibility of quantifying human existence.

We need to resist the rationalised incorporation of humans into radical supercivilisation’s overall schemas, reducing human life to a collection of drives towards pleasure. Life is always our own; therefore, we must be responsible for the way we live. As Patočka argues, the life one leads is an achievement. What kind of an achievement it is depends on the way we understand the world and our place in it; who we want to be. Life is not a ‘rock,’ ‘flower’, or ‘lava on the moon’ that can be measured to determine its properties to formulate laws that would enable us to predict its future behaviour. Human life is not a collection of drives that social media can transpose into a pool of data, while pulling solutions to our life from a hat as a magician pulls a rabbit. Similarly, society conceived on the mechanistic model cannot account for the spiritual and historical dimensions of humans.

For Patočka, the characteristic of supercivilisation is the anonymous acting out of forces that do not rely on charismatic leaders or special events but seem instead to work automatically. Patočka extends the analysis of Toynbee’s ‘categorisation’ of the different forms of civilisation (Toynbee 1972) to claim that ours is historically unprecedented, based on a formal rationality that has forgotten its ground. For Patočka, this leads to knowledge becoming dehumanised

¹⁹ He returned to this study in his last book, *Heretical Essays in the Philosophy of History* (Patočka 1996a).

and de-historicised, reduced to a motley amalgam of ‘information’ and ahistorical formalisation, based on mathematical and – now we can add – algorithmic formulas.

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