

Heidegger on technology

1. Introduction

What is dangerous is not technology. There is no demonry of technology, but rather there is the mystery of its essence. The essence of technology, as a destining of revealing, is the danger (Heidegger, 1977, p.28).

Written in 1954, Martin Heidegger's *The Question Concerning Technology* (Heidegger, 1977) sets out to capture something far deeper than just the surface manifestations of technology: those factories with their endless automations, the methods of mass production in an ever-networked world. His essay is about going deeper and defining the essence of technology as a critical mode of human activity, that may either serve to facilitate a far richer interaction for Dasein in its world or render its dealings unrecognisable and unable to allow connection. The stakes are high and technology acts as something of a final frontier for Heidegger, who uses it to paint a picture of an adolescent phase of Dasein attempting to grasp hold of its maturity. The essay's closing paragraphs, while perhaps not overly optimistic, display a genuine interest in whether the essence of technology might facilitate the profound evolution that is needed, or it will instead it all come to nothing.

While it is true that reading Heidegger's work can at times feel like a relentless onslaught of verbiage, such a judgement is premature. For when one puts in the effort, it soon becomes more akin to pulling on a sumptuous Platonic golden thread, where everything is so carefully constructed in a way that respects clarity above all. Though notorious for his proclivity in semantics, and his constant grappling with grammar, translation, and the wholesale invention of words as they are needed, the language is consistent and surprisingly self-contained.

Note however, the reader will always need to watch out for those non-contextual curve balls (the price of doing business with philosophy I suppose). And in this essay, there are two challenges on that score. The first relates to Heidegger's conception of the self in the world, a construct he denotes as *Dasein*. Dasein is assumed reading for his technology essay (and to undertake that assumed reading, the voluminous work, *Being and Time* is the way to go), but I will provide a brief paragraph on this so that homework can be put on hold, at least for now.

Dasein is not the same as Self. While philosophy may enjoy an unspoken privilege of arbitrating that perfect arc between extremes of clarity and ambiguity, attaching semantically similarity to these terms is not ok. The Dasein that Heidegger speaks of is something far more than the Self. Dasein is not just everyday consciousness, or an awareness of existence, or a kind of Cartesian abstraction positioning the human as a dual agent variously inhabiting mind and body. Dasein is rather a deeply immersive and fluid involvement between a human being and its dealings in the world. It is the collaboration par-excellence, one in which the human

being has accepted the limits of this collaboration along with the fleeting nature of existence. Dasein is an embodiment of the understanding of inevitable physical decay that is borne by temporality. It is also intimately bound up with the idea of authenticity, an authenticity Dasein can forge by accepting responsibility for a limited lifespan and, in the face of this, choose to optimise its situation and possibilities. Note that in the paragraphs that follow I have at times tended to use the term Dasein to refer to a Self who aspires to becoming Dasein.

The second issue is the slight ambiguity that seems to arise between the different definitions of technology, the essence of technology, and modern technology. This is both an issue in the essay itself and the different ways that it has been interpreted, and I will take this up more as these paragraphs unfold. But as succinctly as possible, my take on this is that technology is a particular instance of technology (a particular instrument such as a hammer), the essence of technology is the process that underlies the creation of instances of technology, and modern technology is what happens when the process goes wrong.

A final note before getting into the weeds of Heidegger's essay: it might be tempting to paint him as some kind of luddite, a countryside recluse lamenting the decline of the modern world, some kind of glorious and idealised Wagnerian past. It is a seductive narrative that, while arguably fitting conveniently into some aspects of his biography, is surely an oversimplification. Heidegger always provides the reader with a complicated moral and historical context that is important to acknowledge, however what is fascinating about his essay is how much it cuts across this context and the broader history of the time in which he lived. There is a kind of an eternal truth bubbling throughout, that views the integration of technology as a core challenge for Dasein in its wider search for authenticity.

2. From contrivance to causality to revealing

The first salvo in the technology essay is the classic first-principles philosophical opening: be as general as possible. The question of what the essence of technology is becomes the question or what, really, is anything:

According to ancient doctrine, the essence of a thing is considered to be what the thing is. We ask the question concerning technology when we ask what it is (Heidegger, 1977, p.39).

Heidegger provides two responses. First, that the essence of technology is a human activity. And second, that it is a means to an end. It all feels like something of an opaque opening gambit, for the implication appears to be that the essence of technology could be any activity at all. But the clue here is to note while it might be almost anything, it is nevertheless not something that is 'out there'. Whatever its content may be, it is an indelible part of Dasein's interior. Further, it is a process (rather than a thing or artefact). It is at the disposal of Dasein that is undertaken to shape the perceptions of the world Dasein inhabits.

Heidegger follows it up with more details, drilling down more precisely into the nature of this process. The essence of technology allows Dasein to have things at its disposal, instruments, or contrivances that it can employ to uncover the hidden nature of an obscure world. There is even an unexpected lack of majesty in the way he describes all of this: technology is presented almost as a bag of tricks, being those instruments or contrivances that Dasein creates to clarify its world: "the whole complex of these contrivances is technology. Technology itself is a contrivance" (Heidegger, 1977, p.40).

It is refreshing stuff. Generally, talking about technology is usually such a trigger for doom and gloom. But no tropes like that here. The teen-dystopia spectre of technology displacing the human is mercifully absent. Like I said, Heidegger is not an indiscriminate grumpy luddite, despite the vibe that seems to emanate.

From here, things take an Aristotelian turn. Means leading to ends become causes leading to effects. The instruments and contrivances Dasein arm itself with in the face of the world are recast from ends to effects. This conveniently opens the door to raise Aristotle's fourfold definition of cause and effect, and it all gets broken down as follows:

1. *Causa Materialis*: referring to the material out of which an instrument is made.
2. *Causa Formalis*: referring to the shape of the instrument will be made.
3. *Causa Finalis*: referring to the purpose of the instrument after its entrance into the world.
4. *Causa Efficiens*: referring to the the creator of the instrument, the artisan.

But it is a short-lived love affair. For Heidegger, this characterisation of cause and effect does not hit the mark. It is all a little too arbitrary. Why are there four causes? Why not more? Why not less? And why are things so very discrete? Heidegger immediately counters with his alternate view, that things are just so much more interconnected. Cause and effect are related to the profound nature of collaboration that Dasein finds itself engaging in as it encounters the world.

He goes on to provide an illustrative example of an instance of technology: the silver chalice. This contrivance, he claims, cannot be described as somehow emanating from Aristotle's four discrete concepts. Instead, the chalice appears in the world as an interplay, a profound collaboration driven by the Dasein's inescapable interconnectivity and indebtedness to its world that furnishes it with the perception of materials and ability to work with them. Aristotle's four concepts are reimagined as being far a more integrated affair, where Dasein plays a director role in a process of becoming, limited by the materials at hand. To be human is to collaborate deeply with the world, to create circumscribed bounds from the appearance from the apparently boundless materials that Dasein comes into contact with, because "circumscribing gives bounds to the thing" (Heidegger, 1977, p.43). The instrument that comes to be, is an emergent phenomenon that acts to shed light on a previously unseen aspect of the world and provides a purpose (a "telos") to what was material found in the world.

So finally, to a definition: the essence of technology is a mechanism for Dasein to create instruments or contrivances that reveal the nature of its world, providing it with an opportunity to optimise its being in the world, to fulfil its nature as Dasein. It is a process of “bringing forth”, or “revealing”.

Heidegger wraps up the definition by invoking the Greek term, *Aletheia* (which translates to "revealing") claiming:

Bringing forth comes to pass only insofar as something concealed comes into unconcealment. This coming rests and moves freely within what we call revealing. The Greeks have the word *Aletheia* for revealing. The Romans translate this with *Veritas*. We say “truth” and usually understand it as correctness of an idea (Heidegger, 1977, p.47).

And still he is not quite done. Two more terms are offered up to further articulate all of this: *Techne* and *Poiesis*. *Techne*, (related to yet another term, *Episteme*), comes by way of Plato, referring to a practice of knowing (somewhat like revealing, but from a different angle). This idea, along with *poiesis*, comes together to paint Dasein as a craftsperson, a creative artisan fashioning contrivances out of stuff that is found in the world. The essence of technology, this revealing that is *Aletheia*, turns out to be far more about art: “*Techne* belongs to the bringing-forth, to *poiesis*; it is something poetic” (Heidegger, 1977, p.47).

Following the veritable pastiche of terminology, it turns out that what is really happening here is that technology is a facilitation of the disposition of Dasein acting as artisan. Technology turns out to be a means to Dasein’s artfulness, a nod to the potential creativity of Dasein. Technology then, is something far deeper than what one might expect:

Technology is therefore no mere means. Technology is a way of revealing. If we give heed to this, then another whole realm for the essence of technology will open itself up to us. It is the realm of revealing, i.e., of truth (Heidegger, 1977, p.47).

3. On becoming a bureaucrat in an arbitrary world

It is at about this point in the exegesis that Heidegger needs to turn to the far thornier issue. Maybe the above definition is satisfactory and the definition of the essence of technology has been established. But how does this relate to modern technology? It is one thing for some singular bright-eyed novice Dasein to go about the world fashioning silver chalices to reveal an ever-deepening relationship with its world. But it seems an entirely different proposition to relate this to the modern industrial complex, one dominated by the trappings of mass production and automation. What to make of all those anonymous automobiles flying off an

assembly line, thrust into a multifarious existence of multi-channel marketing campaigns and vast transports network, coming to interact with dozens of subsidiary industries? How can the neighbourhood Aletheia be accommodated into such a version of events? In addressing this, Heidegger claims:

It is said that modern technology is something incomparably different from all earlier technologies because it is based on modern physics as an exact science. Meanwhile, we have come to understand more clearly that the reverse holds true as well: modern physics, as experimental, is dependent upon technical apparatus and upon progress in building of apparatus (Heidegger, 1977, p.49).

It is here for me that Heidegger really comes into the heart of the matter: the theoretical lens through which modern technology takes place, the world of physics and mathematical abstraction, is one whose complexity far outpaces Dasein's capacity in perception and understanding. This means that contrivances in the context of modern technology are not simply more acts of Aletheia for Dasein, or even the result of some multifaceted Dasein teamwork that creates complex objects. It is instead a far more disconnected affair, a relegation of Dasein to a process where the attempted activity of Aletheia no longer has an intention, or anything in particular under its gaze. It is a type of revealing in which there might be process and form, but there is no longer content. Somewhere during the attempt to undertake Aletheia, Dasein's drive to understand the world has turned to empty heuristics.

Another way to think about this might be to consider that while modern technology may be an act of revealing, it is different type of revealing than Aletheia, a revealing that engenders side effects. They arise due to the inherent limitations of Dasein to effectively manage the growing multiplicity of contrivances it has access to, and the tendency to respond to this by creating and accessing more abstract knowledge structures that themselves grow in complexity. Modern technology is Dasein running low on memory, forced into the manufacture of ever more information-heavy devices to make sense of its world. The process of Aletheia that led to all those handy contrivances that successive Daseins can access has left stuff behind over time. Arbitrary information and structure have become strewn across Dasein's world, pushing it into the business of information management.

Of course, this is a non-standard interpretation. On the one hand, I am positing that Aletheia is an activity, a type of revealing, that can enhance Dasein's world. But on the other hand, I am intimating a much darker intent, a side to this process that leaves existential pollution in its wake that successive Daseins in the world will need to wade through, perhaps acting as a limiting factor for Dasein in the world. Modern technology then, becomes not just another instance of Aletheia, but rather the historical record of Dasein's gradual outsourcing of Aletheia in the face of the unbearable complexity that Aletheia has created. It is a kind metaphysical environmentalism problem, a too-much-information quandary, that places a hard ceiling on Dasein's ability to interact with its world.

To make such an opaque argument slightly more concrete, consider this toy example: suppose in a world full of Daseins who all are bubbling along in different phases of development, one of these innumerable Daseins, at some point in the far distance past, created a contrivance. How wonderful! Aletheia has taken place! And suppose also that the contrivance that has been created is what a modern day Dasein might think of as a wheel. It is an exciting achievement to be sure, though somewhat tempered by Dasein's annoyingly limited lifespan: it wanders the earth but for an instant before disappearing into the void. But now this wheel is in the world, an object for all the other Daseins to contemplate and integrate into their own acts of Aletheia. More fabulous Aletheia and utility from it abounds. And as all the subsequent Daseins appear and disappear, the world becomes transformed under the cumulative weight of their revealing. The wheel leads to momentum and curvature and leads to force and leads to mass and leads to abstraction and leads to physics and leads to more and more utility and leads to machines and leads and leads to more and more. It turns out that initial revealing from that first Dasein was just the drop in the ocean of a tidal wave of revealing, creating a world that is increasingly terraformed with informational structure. History itself becomes measured and defined as the growing amount of ordered bits Dasein must wade through. And all the while the Daseins appear and disappear.

So, is there a tipping point to all this? Is there some Shannon like limit in view, a formula lurking somewhere that might return the probability that Dasein can engage in Aletheia? Then again, perhaps that is just an ironic ask, from myself as a downtrodden Dasein trying to make sense of it all. But in any case, is there a point where Dasein can no longer push through an ever-structured world, can no longer reveal anything, but can only attempt to organise? Is history nothing but a growing likelihood that Dasein will be cast into the librarian's clothing, and whose destiny will become one of, "unlocking, transforming, storing, and switching" (Heidegger, 1977, p.49), leading to a hopeless existential disconnect? And when that disconnect happens, what next? Will this constitute a radically changed ontology, one that will demand a Darwinian transformation where Dasein is transformed into the mundane, inauthentic, inconsequential?

Heidegger is a little nicer about it all, but the underlying sentiment is the same: modern technology is a problem of information bloat. He calls out the shift in the purpose of Aletheia as one that leads to *Standing Reserve*. Standing reserve is what gets created when the information overwhelms the activity of revealing. Rather than seeking to optimise its place in the world through revealing, Dasein becomes pushed into the service of simply storing and sorting information. Dasein trades authentic meaning in order to escape the volume of information. And in the process, Dasein becomes a non-self, part of the information which it desperately needs to organise.

Heidegger also refers to this process as *Enframing*. Enframing denotes the inauthentic belief of satisfaction Dasein gains through its activities of organising, sorting, cataloguing. The march of history becomes a growing tendency of Dasein to turn away from the increasingly difficult task of Aletheia and fill the resulting void with Enframing. Enframing may feel like

Aletheia, it may provide satisfaction because the clarity Dasein can gain from organising things, but it is inauthentic and illusory, where meaning has been traded for clarity. And sure, some Daseins out there may still be finding genuine moments of Aletheia, carving out authenticity where they can, but Heidegger's point is that the window is closing fast, that there is less and less space for Aletheia as history rolls on with an increasing momentum.

When I first read Heidegger's essay, I found myself thinking a lot about the novelist Franz Kafka. Kafka wrote these beautiful works where the characters would wander through a world of altogether too-much information, where arbitrary cause and effect reigned supreme. They were trapped in bureaucracy, a bizarre side effect that had arisen from the attempt to build structures to control the bizarre side effects of Aletheia going wrong. It is all a bit meta. Kafka's dehumanised (or deDaseinised) characters wander through a world forced to sort and store for the sake of sorting and storage, forced to fill in forms, attend to different departments, and undergo meaningless processes. Kafka's work shows that bureaucracy is the final frontier of information management, the ultimate perversion of physics when information can no longer be contained, and where both the intent and content of contrivances and instruments can no longer be found. The Enframing self becomes simultaneously the bureaucrat of the arbitrary things and the arbitrary thing of bureaucrats.

4. On Destining

The coming to presence of technology threatens revealing, threatens it with the possibility that all revealing will be consumed in ordering and that everything will present itself only in the unconcealedness of standing reserve. Human activity can never directly counter this danger. Human achievement alone can never banish it. But human reflection can ponder the fact that all saving power must be of a higher essence than what is endangered, though at the same time kindred to it (Heidegger, 1977, p.68).

So, at this point in the Heidegger's essay, things are certainly looking bleak. A duel looks to be on the cards. Will Dasein's fate be Aletheia or Enframing? In the face of a world filled with existential clutter, will it still manage to find something meaningful? Or will it instead be doomed to toil in an information junkyard, a downbeat librarian facing an eternity of aggregation? Will it tend to an authentic life, or will it tend to storage and information management?

But it turns out that things are not that bad. Rather than being the final battle, this is just the necessary existential denouement Dasein sorely needs. To explain the optimistic turn, consider the new term offered up into the mix: *Destining*.

We shall call the sending that gathers that first starts man upon a way of revealing, destining. It is from this destining that the essence of all history is determined (Heidegger, 1977, p.59).

So, what is Destining? Heidegger designates it as the primordial starting point, an initial position for Dasein in its world, an existential outlook embodied in time, a moment when Dasein is poised to embark on the creation of its contrivances. Destining is about Dasein being on a precipice, gazing at what the world makes available. It is a moment of choice for Dasein, an instant of freedom, where Dasein gets to choose: Aletheia or Enframing. And as history rolls on, as modern technology propagates information as more Enframing happens, the choice becomes more precarious:

Thus, where enframing holds sway, regulating and securing of the standing-reserve mark all revealing (Heidegger, 1977, p.3).

But here is the twist. It is precisely because Dasein is up against the wall with nowhere to turn, bound by a ceiling enforced by history, that it can make its final stand to take up authenticity. For Dasein to choose authenticity, it must choose it in the face of overwhelming odds. Heidegger rolls out Holderlin to make his point:

But where danger is, grows
The saving power also
(Heidegger, 1977, p.63).

It is an elegant move. Heidegger has reframed the narrowing space through which Aletheia can take place into a situation where it is precisely this narrowness that is needed for Dasein to ensure Aletheia can be possible in the face of history. Those smaller and smaller spaces made available from which to undertake Aletheia turn out to be prerequisites Dasein needs to make its final move from existential adolescence to maturity.

As his essay hits the final strait, Heidegger keeps riffing on the point, tying it all together. Enframing is repositioned as a fork in the road, the easy choice to make in the face of the information junk that falls out from modern technology. And in the end, this junk turns out not so much to be a side-affect to avoid, but a critical barrier that Dasein must push through to ensure Aletheia can survive and effectively face the onslaught of history. It is a qualitative shift to accommodate history itself into Aletheia. Technology turns out to be the key:

Thus Enframing, as a destining of revealing, is indeed the essence of technology, but never in the sense of genus and essentia. If we pay heed to this, something astounding strikes us: it is technology itself that makes the demand on us to think in another way what is usually understood by "essence" (Heidegger, 1977, p.65).

As History continues to unfold, it might seem like Enframing sure has a lot going for it: clarity in the mess, being spared from the search for authenticity, taking refuge in the fleeting utility of demonstrable cause and effect. But these are false hopes, that will lead to an end of any kind of meaning for Dasein:

Thus, where everything that presences exhibit itself in the light of a cause-effect coherence, even God, for representational thinking, can lose all that is exalted and holy, the mysteriousness of his distance (Heidegger, 1977, p.61).

Instead, Dasein needs to overcome this challenge, to accept the historical component of its Aletheia, and find a way to exist in the face of history, to not be desperate to reach out to simply organise what history leaves behind. He makes a bold wrap-up of it in closing sentences that do not disappoint, kind of an extreme-sports-meets-Nietzsche situation. If adolescent Dasein is to become mature, it needs to go hard:

The closer we come to the danger, the more brightly do the ways into the saving power (Heidegger, 1977, p.70).

5. Conclusion

The man hunched over his motorcycle can focus only on the present instant of his flight; he is caught in a fragment of time cut off from both the past and the future; he is wrenched from the continuity of time; he is outside time; in other words, he is in a state of ecstasy. In that state he is unaware of his age, his wife, his children, his worries and so he has no fear of the future (Kundera, 2020, p.3).

I have chosen the final above passage from Milan Kundera's novel *Slowness* to wrap things up. But why? Because it captures the modern situation, where today's Dasein has checked out of the building. Overwhelmed by information, it hides in information's remnants, taking refuge in the echoes of time and history, rejecting history as a core component of Aletheia. And in this escapism, it lives a life of ecstatic forgetting. But this will never work: to ignore its role as custodian of information, of time and history will only ensure it will become indistinguishable from information, time, and history. So, Dasein needs to decide: to run away into information, abstraction, ecstasy, like Kundera's motorcycle man, or choose Aletheia in all its complications.

Reading philosophy is to be always assaulted by allusions, explanations, difficult conundrums. In Heidegger's technology essay, he asks the reader to consider whether humanity, long before succumbing to the heat death, might instead succumb to something far

more moribund, a kind of information death. Finding out how it all pans out will be an crazy ride for sure.

References

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