

## *Abstract*

This paper is a reflection, through the lens of Heidegger's view on technology and Husserl's Crisis in the European Sciences, on the effects of a technological attitude on the field of science as well as why and how this system is failing. Heidegger's notion of technological enframing (from his Essay "The Question Concerning Technology") can be said to be the way that technology reframes our view of the Natural World as "fit to be used" or "standing reserve". Heidegger's essay develops the way this technological mindset develops and reduces everything to standing reserve, alienating us from the world around for the sake of ends and progress. To me the cadre of Natural Science is the field most worthy of discussion as it is simultaneously the most "fallen" and apt to recover from the Crisis. In my paper I have tried to set forth what the field loses with this enframing and how this can be amended.

## *Science and it's Enframing – a Heideggerian perspective on the current state of the Sciences.*

There is a built-in blindness to the sciences stemming from their technological enframing that, I wish to argue, is becoming more influential as the sciences become more engrained in culture. Seen in Heidegger's work on technology is this effect on the sciences, which can be summarised by the following quotation: "*the sciences are not in a position to represent themselves to themselves*" (found in his Science and Reflection essay<sup>1</sup>). I plan to briefly trace the origin of this, draw out the consequences, and look to a possible remedy that I believe can be found in the natural sciences. My focusing on this aspect of Heidegger's is to show why I see it as a perspicacious and nuanced theory, with the possibility to revolutionise science and the way we carry out our lives.

Heidegger does not see this as a "problem" so much as the way it is. To try to "fix the problem" of technological modes of being is to succumb to a technological mode of being. My response to this is that there are also ways the alienation innate to this mode of being can be alleviated following a change to the treatment of natural sciences.

It may be helpful to clarify what this "self-blindness" of the sciences actually is. Heidegger and Husserl talk about a "technologically enframed mode of being" and a "Natural Attitude" respectively. The former unconceals Nature as standing reserve or part of a supply chain to be used for our benefit while concealing its doing-so; and in the latter "*objects of consciousness are taken as if they were factual items*"<sup>2</sup>. These modes of being lead to an ignorance of initial motivation. Science is unable, using its own methodology, to what its purpose is. This is a role of Philosophy.

### 1. How did we find ourselves in this position?

Heidegger devotes less to how this mode arrived and more to the way it is. Understandably, since for him there is no escaping anyway so "the origin" isn't especially interesting. Husserl, however, does some work regarding its occurrence.

In his *Crisis of European Sciences*<sup>3</sup> Husserl, with a historiographic view of philosophy, discusses science's origin. This started with the Renaissance as a "*repetition and universal transformation of meaning*" (The Crisis) - returning to the ancient philosophical view of philosophy as the central tenet that imparts meaning. Out of this came Positivism and Scepticism as the principle schools – where the former is the requirement of "sufficient evidence" to draw claims, stemming

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<sup>1</sup> Henceforth [S&R], citation reference can be found at the end in the bibliography

<sup>2</sup> From the Internet Encyclopaedia of Philosophy page on Husserl, reference in bibliography

<sup>3</sup> Henceforth [The Crisis], citation reference can be found at the end in the bibliography

from an empirical understanding of knowledge from sensory experience. Out of these came the Scientific Method.

So what is “The Crisis” in modern sciences that Husserl laments? The answer: Science builds itself into an edifice that deals solely with “*the validity of the factually experienced world*” (The Crisis). Scepticism and positivism lead to the digestion of reason and ideas, damaging us with “*respect to the total meaninglessness of its (Europe’s) cultural life*” (The Crisis). Once the system is started, it destroys uncontrollably. Science reaches a point where it is unable to answer “why are we doing this?”, or respond to the meaninglessness of human existence. It becomes so instrumental-based that it doesn’t question itself - by the “scientific method” it builds itself above everything else such that only it matters.

In Heidegger’s *Science and Reflection*, he asks what it means that “*Science is a theory of the real*”, contending that “*Science sets upon the real*” (S&R). Earlier on in the Question Concerning Technology<sup>4</sup>, the phrase “sets upon” first appears as a translation of [stellt]. This is way technology acts upon nature and reveals it to us. It is not a creative revealing in same way a sculptor sets upon a block of marble. Nature is unconcealed as energy supply or “standing reserve”. Heidegger says with science “*everything real is recast in advance into a diversity of objects for the entrapping and securing*” (S&R) –science reveals the real as objects at the disposal of the particular field of science at hand. Much like the technological revealing this conceals its nature from us, and the tendrils of the Sciences wrap themselves around every real aspect, until the culture has lost sight of its role as people and becomes only scientific. In these we see a summary of the nature of Science.

As to the response to this, at the end of QCT Heidegger refers to a Hölderlin poem, “*saving power grow[s] there also where the danger is*” (QCT). It is in awareness of our free essence being at risk at the hands of technological enframing that we can see the response. So long as we represent technology as an instrument, we have the potential to master it. Once it gathers a causal nature, we have fallen back into the frame. This can be achieved through an understanding of Nature. We do not *have* to see nature as standing reserve, but as existing for itself – as the space in which we share. This should put the Natural Sciences at a particular advantage. Yet the same reasoning that the saving grace is found where the danger is means that the danger is found most close to the solution. Because of the Natural Sciences’ potential, they are the most fallen, the most blind.

## 2. What does this mean for Science?

Natural Science has become a system where Nature is not valued for its own sake, or as a whole. It is fragmented into parts almost ad infinitum down to molecular substrates. No individuals remain, only an infinity of categories, classes, traits and species. No individual possesses any standing in the system except as a manifestation of the rules, theories and descriptions. The Natural Sciences become alienated from Nature in the act of homogenisation.

One could look at the this alienation manoeuvring through every enframed facet of life but this would take reams of paper, and far longer than anyone has the time for. I will try to focus on the Natural sciences because of their “saving” potential.

Husserl talks of an essential nature of humans as “*a socially and generatively united civilisation*” (The Crisis). It almost goes without saying how much this is not the case in science. Isolated by a dogmatic devotion to “the facts”, researchers and students are imprisoned in laboratories for hours on end to repeat the same tasks, simulating nature in so removed a fashion from how it actually exists that it becomes pure simulacrum that no one – besides those deeply

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<sup>4</sup> Henceforth [QCT], full reference in bibliography

engaged in the community - can follow. The technisation of the natural world has now become institutionalised in such a way that it is unintelligible to the outsider.

Then there are the research papers. With strict regulations, all words are void of personality and purely a means to represent “factual data”. One is hard-pressed to find a subject in a scientific journal. Entrapping the real must be an option for all, universality and repeatability is and always will be the dictum. Clearly the yearning for “objectivity” and the existence of free and un-objectifiable individuals are at loggerheads. To solve this, these papers have been rendered devoid of character.

This is the homogenising power of the sciences – each individual partaking in scientific activity is amalgamated into the system, and removed of discernibility. This is no subtle act – there is a clear and concerted effort made towards a conformity: from the way one carries out experimentation to the way one talks about it. The guidelines are unyielding.

Looking at the content of Natural sciences, this involves the breakdown of every aspect of the world around us into parts. Not only is it the case that we remove the “wholes” from the world to see just aspects, but these parts are all interchangeable. From organs and individuals, to environments and species – these are labels that enable us to segment and distribute the world around. Each of these parts is then further fragmented and confined to a circuit of orderability.

In their setting upon the Natural Sciences challenge Nature in a different way to technology. It still serves as a resource - though as a *resource for science*: everything becomes “study-able”, it is a totalising objectification of the Natural World into academic resource. Like a fractal, as the magnification on individual objects increases there is more and more to perform science upon. Science justifies that “we are getting closer”, arguing that the more truth is unveiled, the closer to “completion” the field becomes. This exemplifies the blindness - science begins as something to serve through discovery, yet now people exist to serve science and abet in the goal of discovery and organisation of the natural world. The scientists are a part of the production line, churning out factual data to get “closer”. Almost ironically this closeness brings us no nearer to Nature despite an intricate understanding. Science doesn’t just make it difficult to attain nearness to the natural world, it makes us forget this even exists.

This leads to my final remark – the separation of science and art. These terms are now viewed as total antipodes. We need only think of the way a Bachelor of Arts and of Science are thought of as so apart. Science, in seeking an objective validity and instrumentality segregated itself from the arts, adding to the alienation it imposes. Science is then considered “objective” and removes itself from affiliations with any humanistic topic on the grounds of their lack of “objectivity”. This forces those who partake in the scientific endeavour to be committed to it alone. It does not foster intermingling.

### 3. A Resolution?

Husserl and Heidegger reach different ends when it comes to “what to do”. Heidegger says that this is an inherently technological response – to try and “solve the issue” and is still very much enframed - so our goal ought to be not to try and exit the frame but exist within it.

Heidegger doesn’t view this technological framework as inherently bad or good, it is a contemporary fact of life. Yet there is a way of living that allows us to become “reacquainted” with our essence as *Dasein*. This is done by transforming our mode of being into one where technology

(as in machines and tools) is at our disposal to profit from, but where technology (as a mode of being-in-the-world) is not the way we immediately encounter the world <sup>5</sup>.

Husserl sees the possibility of a phenomenological science as the answer. He thought of psychology as a possibility—being so focused on the human subject, reason and the psyche, it was believed that this could provide a bridge between the gap of art and science. Instead, it too succumbed to the natural attitude and attempted to render the human subject an object. This results in the notion that the human psyche holds just more data to accrue and make into a stationary, observable “facts”.

What I wish to propose as a resolution is in this sense of changing our mode of being, specifically in the way we deal with the sciences. This proposition allows us to mitigate the crisis of Husserl. As I have alluded to, I believe the answer is in the Natural Sciences. Natural Sciences are about the Natural World, as such they ought to be in position to aptly address the issues discussed. First, we must see why how the arts have come to differ from the sciences.

Heidegger describes the arts, in the sense that they bring forth out of concealment, as a poiesis. This is their creative power of generation. Heidegger ascribes this power to “*Physis also, the arising of something from out of itself*” (QCT), where *physis* can be thought of as a bringing forth in-itself, such as in nature. The arts and nature both have this sense of poiesis that brings the former in touch with the latter. The artist sees in a way the mere observer doesn’t (not only because the observer is likely enframed by technisation). The artist sees the Natural World as it is in-itself without seeing instrumentality and purpose. A natural scientist can know everything there is to know about a tree: how it reproduces, how it grows from shoot to tree, the manner by which water transpires and sap translocates around the organism, or how it makes energy; and yet when a natural scientist looks at a tree they lack the clarity of the artist. They cannot see the tree as it is before them, as a whole. Natural science is so close to Nature that it trudges through and inside it, but in terms of nearness, it is as far as can be. It has distanced itself for the sake of “objectivity”.

However, what if this distinction between arts and science was put to the side? Natural Science, ought to be able to view the Natural world as it is in itself, and be aware of its frame. What I propose, working from the ideas of the phenomenologists mentioned, is an awareness by the Natural Sciences of their limits and shortcomings - an understanding that as much as science can reveal, art too can reveal. Further even, that to study and to experience are not the same, and a cooperation of the two can be greatly beneficial – to attempt to meld the poiesis of art (and thus Nature) with the instrumental revealing of science, to foster an appreciation not only for the capabilities of the Natural world, but the World in itself.

To me the Natural Sciences possess possibility by their original schema - in the early days of the field Natural Scientists saw no distinction between the arts and sciences they were both modes of understanding the world. If you look at the scientists at the time (17<sup>th</sup> century) they were mostly polymaths – Francis Bacon, Thomas Browne, Gottfried Leibniz, Isaac Newton – these men were not simply scientists but understood the way philosophy played a key role as a maker of meaning. This is not to say that the acts of research and studying the world should be halted indefinitely, but if they are to go forth, they must accept positionality. There must be an acceptance of the subject involved – and the limits that it resides within. At the moment science is wholly blind to its boundaries, its self-blindness prevents it from answering “why?”. “Why should we study the human body?” or “why is science a worthy endeavour?”. It just is. The role of science is to seek the truth out there, and the truth must be sought out because it is the role of science.

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<sup>5</sup> From the Stanford Encyclopaedia of Philosophy page on Heidegger, citation in bibliography

If Science accepts that there is an level of experience that it cannot capture, an element of reality that evades recasting as an object, then this alienation can be avoided. There is a way that Science can work in parallel with the Arts. The poiesis of Art can tell us something about ourselves and our essence that is totally uncapturable by Science, the latter ought to be able to accept its role as instrumental (but vital nonetheless), and still make room for the role of Art. This is carried out by the way people live their lives and is enabled by the society they live in. This change is not done by legislation, but an understanding in individuals of the way it can be, and what the possibilities are.

Science has become the Great Ouroboros destined to feast on itself indefinitely – if left like this it shall remain onanistic and benighted. If art and science can be reconciled, re-positioning science as a way of revealing the world around in a poetic sense and not merely as standing reserve, then the system reinstantiates its grounding. There is a version of science as an art that is attainable, but only through reformation of the way individuals, the arts and, most crucially, the sciences themselves view science.

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