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Article

The Technological Abyss: Heideggerian ontology and climate change

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Abstract

Whenever a decision is made in a social, political, or economic context, it is implicitly grounded in an ethical outlook. But where do these outlooks come from? To investigate this query, I examine the basis for ethical decisions regarding technology, focusing specifically on geoengineering responses to climate change. Subsequently, I argue that ethical considerations concerning climate change, and their corresponding practical decisions, cannot be reliably made without sufficient *intelligibility* regarding the objects and entities these decisions pertain to. To achieve this, I employ a Heideggerian phenomenological framework through which *being* affords intelligibility. Doing so elucidates fundamental inconsistencies in the way humans interact with technology. We are caught up in what Heidegger calls *enframing*, the representation of beings as energy reserves. This is the ground on which our ethical claims are based, but representation cannot afford actuality. When things are represented in this way, truth is set aside in favour of will, and intelligibility is lost. The goal, then—if we wish our ethical decisions to be legitimate—must be to gain intelligibility. We must therefore free ourselves from enframing and look toward being. We cannot, as Heidegger says, affect enframing's removal, but we can *prepare* ourselves for such a change. Only once this change occurs, can our relationship to technology be intelligible.

Introduction

In our current age's technologically advanced and progressive framework, we often notice problems and dissonance that arise as a result of our interactions with technology. Our response is often to propose various changes and re-examination(s) of policy, government, social organisation, and technology as well as any other basic institutions that constitute our way of life. Whether these changes are instituted and whether or not we believe them to hold any efficacy is unimportant. That they are pondered, and more importantly how they are pondered, holds more importance for examination.

In general, there are two categories of technological problems humans attempt to solve. The first, and most common by far, concerns insufficient knowledge. All branches of technology and science work continually toward discovering new information and applying it to various theoretical and practical areas. If a pressing problem arises that cannot be solved by current scientific/technological knowledge, it is often attributed to lack of knowledge. The second, and rare in comparison, are normative. These arise when some innovation, decision, or discovery in a field of technological study is scrutinised with regard to its moral legitimacy. Additionally, these categories may be combined to create a hybrid response that considers moral issues with the recognition of a dearth of knowledge.

Since this paper is primarily concerned with philosophical issues, an assumption of normative, or even hybrid primacy could be expected. However, throughout the course of this paper, my aim will be twofold: (i) to demonstrate that these categories possess no meaningful difference, and hence fail in their response to climate change crises and (ii) because of this failure, it is necessary to circumvent them completely; and through a Heideggerian ontological framework, I will demonstrate that any social, political, and economic changes or decisions—as well as their grounding ethical concerns—are not viable without first clarifying the very basis for the entities with which we interact when making them. To do so requires humans to question the basis of their relation to technology and, as a result, realise that the conception of it as exclusively based on human agency is misguided and damaging.

Geoengineering, Climate Change, and Technology

To demonstrate my argument, I will employ a case, which elicits responses to both categories. Geoengineering is a controversial and popular topic in the current Climate Change debate, and those who participate in it utilise varying argumentation strategies. Two main areas exist in which Geoengineering works. Solar Radiation Management (SRM) consists of "creat[ing] conditions such that Earth absorbs less sunlight or mak[ing] it easier

for the Earth to radiate heat energy back to space" (Biello, 2010, n.p.). SRM strategies are applied through various technological methods such as "putting giant satellites in space to deflect sunlight away from Earth, putting tiny particles in the stratosphere, whitening clouds over the ocean, or perhaps whitening roofs or planting lighter [colored] crops" (n.p.). Carbon Dioxide Removal, on the other hand, focuses on "ocean- and land-based efforts to remove carbon dioxide from the atmosphere via physical, biological, and chemical processes" (Wong, 2014, p. 170).

Both of these areas rely on technology that is currently available or in development. But Geoengineering itself has arisen from the perceived lack of knowledge and dearth of technological recourse concerning the general issue of Climate Change. Current and past technologies are considered deficient in sustainability, whether they release too many pollutants for natural processes to deal with (coal powered industry)[1] or remove natural mechanisms for pollutant suppression such as deforestation or degradation, which can "affect carbon fluxes in the soil, vegetation, and atmosphere" (Gorte & Sheikh, 2010, p. 3). As a response to the general collection of these problems termed Climate Change, Geoengineering makes a normative argument, in which it considers the most effective solution to be technological intervention to mediate or even reverse the effects of previous and current technologies on the Climate. In other words, we must re-evaluate our use of technological instruments and propose a change that will either introduce new technology or endorse more efficient ways of using current technology.

A powerful and popular argument for technological solutions is based on a proposed time frame. Ken Caldeira (as cited in Biello, 2010) asserts that, at present, Climate Change is "essential[ly] irreversib[le]" (n.p.), meaning that emission reduction is no longer a viable option. Hence we *must* turn to technology to once again deliver us from danger. This particular attitude clearly demonstrates Caldeira's belief in the exclusivity of human agency concerning application of and interaction with technology. He alludes to this attitude by discussing the risks Geoengineering presents. There may be problems concerning "[developing nations] that cannot grow food [in the future]" (n.p.), but these would be solved through genetic engineering. As such, the primary concerns raised are those of technological proliferation. The priority, then, is on technological progress and

[1] The United States Environmental Protection Agency asserts that "in general, climate changes prior to the Industrial Revolution in the 1700s can be explained by natural causes", whereas "recent climate changes cannot be explained by natural causes alone" (Causes of Climate Change, 2016, n.p.) changes prior to the Industrial Revolution in the 1700s can be explained by natural causes", whereas "recent climate changes cannot be explained by natural causes alone" (Causes of Climate Change, 2016, n.p.)

utilisation. Caldeira (as cited in Biello, 2010) remarks that research concerning Geoengineering will be "entering into uncharted territory" but defends its merit by reminding us that "we are already intervening in a big way in a very complex system" (n.p.). In other words human intervention via technology is warranted merely because technological intervention has already occurred. We must, as is argued, right the wrongs that have already been committed. The counterargument, of course, reminds us that since the problem of Climate Change has presented itself as a result of human ineptitude in handling technology it is absurd to return to the cause of the problem for a solution.

Resolving problems caused by technology by employing further technology, whether absurd or not, is frequently presented as the basis for societal progress. Its roots grow deep and spread far, as evidenced by our perception of problems and their solutions. If the technology that we currently possess causes a problem, it is for one of two reasons. We either have not discovered/developed a technological manifestation that will overcome the issue, or humans themselves have misused already existing technology. In both of these situations, technology retains an exclusive status—one of *neutrality*. And how could technology perform any other role? It consists of a group of materials combined and refined by human ingenuity into an apparatus engaged solely in serving human aims. Thus, any problem that occurs concerning technology must concern the human will and intellect.

This attitude also thoroughly pervades overt normative issues regarding Climate Change. Most of these problems concern some aspect of political, economic, or ethical dissonance. It is far too late now to deny the pressing nature of Climate Change (though some still make feeble attempts), but the matter of a solution remains as unsolidified as ever. Some argue for technological solutions, while some completely deny technology's efficacy. The main debate centres on responsibility concerning implementation and risks regarding both pre- and post-implementation scenarios (Wong, 2014, p. 187). Both of these issues are based on political, economic, and ethical debate. Who, for instance, ought to be involved in decision making processes, and how should the participants be decided? In addition, unintended effects resulting from climate intervention raise potent normative issues. If side effects cause dire situations in unintended areas, not only will innocent and unrelated lives be negatively affected, but political dissidence may also occur. Or, if there are no unintended effects, countries that do not have the resources to participate may be unable to benefit from the effects. In fact, simply in deciding to implement Geoengineering we are placing a "burden and a responsibility" on future generations to continue maintenance of a program, the implementation of which they had no say in (Wong, 2014, p. 188). However, there is no need to elaborate on these issues because their intricacies

hold no import in this discussion. It is much more important to illustrate the ground from which they stem.

The current understanding of technology deems it a function of human agency. Hence, both categories of technological issues are based on this assumption. So, if Geoengineering is implemented, it is unclear as to what exactly will occur. But unknown consequences do not prevent policy makers and scientists from interpreting the basis for any possible result. If we release aerosols into the atmosphere and the effect is beneficial, then this outcome was brought about by the innovation and intellectual prowess of those involved in its dispersal. If it creates negative side effects, then the fault is on those who implemented it, or those in a position to allow its implementation, or even those who had the audacity to even consider developing such technology. In fact, implementation need not occur. Predicted political disagreements concerning control, decision-making, and "distributive justice" (Wong, 2014, p. 187) may be enough to cause serious conflict. All of these circumstances are grounded in the same assumption—at its base, any consequence will be considered a result of human activity, not the neutral technological instruments that exist only to fulfill human interests.

But how does this understanding change anything? Common sense tells us that technology is a term for the combined mass of apparatuses, which fulfill their role as human instruments and we consider them neutral because of this. Technological apparatuses can no more hold agency than a rock. It is clear, then, that what is most important for those in the field of environmental philosophy must be assessment and regulation of the effects of technology as the human will directs it. But this statement in fact illustrates that, though technology is physically a collection of matter arranged by humans into useful instruments, it also purveys a specific way of thinking. Thought is expressed through language, and hence this kind of thought is exemplified by the vocabulary we use and the way in which we use it. The words *used* and *instrument* demonstrate something more essential than an attitude or world-view, something that runs deeper than attitude or opinion. Technology, in its essence, alters and stifles our *way of being*. This is not merely an individual belief system or way of understanding the world.

Martin Heidegger (1953/2010b) takes a phenomenological approach to understanding humans and their interactions with "beings [they] need not [themselves] be" (p. 13).[2] At the base of this endeavour, as we will see, is normativity (Crowell, 2013, p. 1). This has, however, nothing to do with moral imperatives. *Dasein* (i.e., the human being) is

[2] I use marginal page numbering for *Being and Time*.

constituted exclusively by "possible ways…to be" (Heidegger, 1953/2010b, p. 42). Because they are worldly (Crowell, 2013, p. 29), humans interact with the world in a different way than other animals (Rentmeester, 2015, p. 9). Heidegger calls this kind of interaction "encounter[ing]" (Heidegger, 1987/2001, p. 8). This means that we have the capability to understand objects as a "totality of involvements" (Crowell, 2013, p. 25). Each object is a totality by virtue of my own practical abilities. I know that there are two other sides to a building I am standing in front of because I have the ability to walk around to the other side (p. 26). To be worldly is to have the ability to gather these intentional involvements into a world, or "unity of meaning" (p. 22), in which objects are given as an "in-order-to" (p. 25) complex according to some norm based on my practical involvement with said objects.[3] The building presents itself in order to fulfill the role it was created for. But such a process seems contingent. After all, meaning is only something plastered on top of an object by humans. But Heidegger disagrees with this. Objects are, in fact, unable to appear at all without some kind of "instrumental nexus" (p. 28) of relations providing a way to perceive them. Humans' ability to synthesise this nexus differentiates them from nonhuman animals, who cannot garner meaning from their interactions with objects.

But merely characterising the intentionality of objects cannot account for human interaction with them. Objects can only present themselves *as themselves* "within…an understanding of [our] own being as subject to normative evaluation" (Crowell, 2013, p. 28). Heidegger (1953/2010b) thus asserts that "higher than actuality stands *possibility*" (p. 38), for in our authentic form, we choose ourselves, and from these choices arises a way of being. This being, if we wish to achieve authenticity in our relation to other beings, must necessarily become our primary concern (p. 12). As a result, in choosing our being, we must already have committed to certain "norms" (Crowell, 2013, p. 29). That is, we must willingly submit to evaluation with respect to the norms that govern our chosen being. In order to *be* a philosopher, I must have already committed to normative evaluation, that is, to at least attempting to follow certain norms that govern the vocation of a philosopher (p. 28). It is not whether I succeed or fail in my attempts, but rather *that* I can do so that is important. Normative commitment is hence a condition for the possibility of having any being at all. Without being, no meaning is possible, and everything falls to unintelligibility (p. 27). By understanding Heidegger in this way, it becomes clear that his main concern is to encounter

[3] It is useful here to note the importance of practical involvement. Heidegger by no means subscribes to the Kantian transcendental notion of a complete psychological ground for experience. *Dasein* must at least have the potential to interact with objects in a concrete manner (Crowell, p. 25). The recognition of this ability—"being-in-space [ontic involvement]"—and its possibility only "on the basis of being-in-the-world in general [ontological recognition]," for Heidegger, is called "*facticity*" (Heidegger, 1953/2010b, p. 56).

objects in their revealed form, or "givenness…[their] norm-governed synthesis" (p. 24)—their presence "as they show themselves in themselves" (Heidegger, 1953/2010b, p. 35)—their being (p. 61). To discern the intentional involvements in which objects rest is to exercise "transcendence" (Crowell, 2013, p. 27), but this is, as I have said, insufficient.

Transcendence is a process of "ontic intentionality"[4] (Crowell, 2013, p. 27). We transcend ourselves practically "toward beings other than [ourselves]" (p. 16), but "practical engagement can yield intentional content…only if I can respond to [normative conditions] *as norms*" (p. 28). Without a precise understanding of ourselves in our being—a "normative moment" of commitment—things would "lack 'being'" and we could never truly encounter objects (p. 27). Heidegger concludes from this that our concern with this understanding—"primal transcendence" (p. 28)—is the basis for any possible investigation into the world, for without it no legitimate investigation would be possible. As a result, "*ontology is possible only as phenomenology*" (Heidegger, 1953/2010b, p. 35) because their aims intersect. Primal transcendence, then, because it provides the necessary normative basis for intelligible apprehension, allows access to a realm in which truth burgeons—where the truth of being is accessible and entities *reveal* themselves in their truth. Access is barred to those without an adequate understanding of their own being, and without access to this 'primal' realm, we will inevitably be presented with a skewed understanding of the world. If our investigations fail to take this into account—if we ignore being as the basis for understanding—we cannot possibly gain any kind of "primordial knowledge" (Heidegger, 1953/2010b, p. 153).

The Essence of Technology and Human Agency

What, then, is the danger of ignoring being? Geoengineering—and its motivation, climate change—though useful in exemplifying the problematic misunderstanding of the ground on which our technological choices are made, can still be considered merely one example among many. Each is a *symptom*, and must therefore be built upon in order to diagnose the disease from which they are born. Building on these symptoms, Heidegger (2008b) questions their basis and diagnoses this diseased way of being as *enframing* (p. 325), which denotes the *essence* of technology. Humans use technological instruments as a means to an end, to improve our lives and represent ourselves as dominant over and among other beings. They are used in this way because interaction with them is considered an exclusively human activity (p. 312).

[4] "An inquiry into what it means to be is called 'ontological,' whereas an inquiry about an entity is called 'ontic'" (Gelven, 1989, p. 24).

But the essence of technology is "nothing technological" (Heidegger, 2008b, p. 325). We can learn nothing about enframing by examining these instruments. They are, as it were, symptoms of symptoms. Our interactions with them, however, betray their ground. It is the "objective character" we attribute to them that elucidates the "nature of technology" (Heidegger, 1971/2013, p. 110). Under the sovereignty of enframing, we place "before [ourselves] the world as the whole of everything objective, and [we place ourselves] before the world" (p. 107). This is a process of *representation*. The essence of technology forces on us a way of revealing things in their appearance (Heidegger, 2008b, p. 319) by teaching us that the human will serves nothing and no one, affording us "absolute rule" (Heidegger, 1971/2013, p. 109). The action of revealing, which is grounded in "the realm where revealing and unconcealment take place, where…truth, happens" (Heidegger, 2008b, p. 319), reveals truth in whatever it is focused on. But the truth revealed is not always the truth that can be found in the realm of primal revealing. Enframing—one of many "way[s] of revealing" (p. 330)—uses humanity as a vessel to force its quarry into "revealing" (p. 320) itself in a specific way, directed toward a specific "form of truth" (Heidegger, 2008a, p. 244), so that we may recognise its appearance as projected by this truth.

Technology, as a disciple of enframing, subsequently represents a limited form of truth. In our interaction with objects under enframing, we fail to reveal their true "givenness" (Crowell, 2013, p. 61) because we have circumvented any consideration of ontological awareness. Technology therefore narrows the possible truths that can be discerned in any particular being because it, just like any other ontic consideration, places itself between beings and meaning (Heidegger, 1953/2010b, p. 153). Through enframing's parasitic effect on us, we lose our authentic selves and with them any possibility apart from continuing down the path of enframing. But this is all we are (or at least were). We are "being-possible" (p. 145). Enframing removes all possibilities but one and tricks us into believing we are making a choice. In our helpless subservience to it, the beings with which we interact are "set upon" (Heidegger, 2008b, p. 326) or "challenged" (p. 321). Those affected by this challenging must be "immediately on hand…to stand there just so that [they] may be on call" (p. 322) at all times as a source of harvestable, storable, energy. This process is not merely a way that humans regard other beings. Through humans, it changes and narrows the identity of the being it acts upon. Regardless of the target, its identity is ultimately changed into "standing-reserve" (p. 322). A dam changes a river into a "water power supplier" (p. 321), a field becomes a mine (p. 320), and even the sun becomes a source of energy to be extracted (p. 321). This is not, however, limited to extraction, since we also manipulate these standing-reserves in an attempt to reduce the effects of other symptoms of enframing. Geoengineering is an example of the employment of one

symptom to mediate another without insight into their ground. However, giving examples is not particularly effective in understanding the character of enframing.

What must be asked is: why does this happen and who or what is at the basis of enframing's challenging? Though Heidegger (2008b) insists that the essence of technology is *not* reliant on human agency—we do not exercise control over revealing (p. 323)—it is to humans that he looks for the medium through which enframing works. Though we choose ourselves (Heidegger, 1953/2010b, p. 42), we are ultimately submissive to enframing and hence are always already "claimed by a way of revealing that challenges [us] to approach nature as an object of research" (Heidegger, 2008b, p. 324), removing being from the equation. As such, we ourselves are ensnared and challenged by the revealing that allows us to challenge things around us. In this situation, we become convinced of our sovereignty over technology, and therefore other beings. And though technology is not reliant on the human will, enframing convinces us that it is (p. 332) so much so that we reduce everything around us to a product of or interaction with our will. A useful example of this conception can be found in Marshal McLuhan's (1969) *Understanding Media: The Extensions of Man*. In it he argues that technology allows us to "use anything for fuel or fabric or building material," and as a result of technological progress into the electronic age, "all solid goods can be summoned as solid commodities" (p. 65). Electric media, for McLuhan, are extensions of our nervous systems, whereas rudimentary technological media are "mere extensions of our hands and feet and teeth and bodily heat controls" (p. 64). Nevertheless, in both cases he implicitly asserts that, regardless of the type of technology, it is an extension of the *human will*. His conceptions demonstrate humans' "will to mastery" (Heidegger, 2008b, p. 313), considering technology and nature alike extensions of our actions on them. This alters anything technological into a means to an end—the domination of other beings—and by utilising electric media in this way, nature "stands ready of access" (McLuhan, 1969, p. 66). Here he betrays his belief that beings are "on call, ready to deliver" (Heidegger, 2008b, p. 321) the energy that is "unreasonabl[y] demand[ed]" (p. 320) from them by enframing. He condemns all beings apart from humans to subservience to the higher cause of technological progression.

Humans, in this manner, mislead by enframing, suffer from various "delusion[s]" (Heidegger, 2008b, p. 332). They crown themselves "lord[s] of the earth," believing that "everything [they come across] exists only insofar as it is [their] construct" (p. 332). We begin to believe that without us, nature would be a mere cluster of disorganised elements without identities, and technology would never have existed. This constitutes the attitude of enframing in which we reach "mechanization…a translation of nature, and of our own natures, into amplified and specialized forms" (McLuhan, 1969, p. 63). This is considered

possible only because humans lend their attributes to this process by applying their will, and in this way, everything else becomes a function of the human will. Whether it is a wheel as the extension of the human foot or a computer as "an extension of our own consciousness" (p. 67), we attribute their existence to the power of the human will.

But this is, as I have said, a delusion. Ensnared in it, we remain unaware of our own imbroglio. For just like the beings around us, which we consider nothing but a collection of use values, we ourselves are in danger of slipping into standing-reserve (Heidegger, 2008b, p. 332). In our complete fixation with what we believe to be our own agency we neglect enframing's effect on us. This effect is identical to our effect on beings around us. Humans are close to becoming "nothing but the orderer[s] of the standing-reserve" (Heidegger, 2008b, p. 332) even in their very being. But even saying it now will not initiate a change in understanding. We linger in an incomplete awareness of this very fact. We notice that we are not standing-reserve and recognise our role as its orderers, but ignore our subservience to enframing. We are special—orderers of the standing-reserve toward which we direct all of our energy. This gives fuel to the delusions under which we labour. We take this statement as a triumph—we are on top, sovereigns, tyrants. But in truth our position is much more fragile than we could possibly know. We order, but at the same time our relationship with enframing remains one of submission. Enframing is a way of forcing meaning on the world, of "revealing" (p. 323) a limited truth in things, and though humans are able to "conceive, fashion, and carry through this or that in one way or another. [They do] not have control over unconcealment [revealing]" (p. 323). By this Heidegger means that humans are not the proprietors of the standing-reserve, we are instruments of enframing, just as we consider other beings to be instruments of our will. We do not control this (or any) kind of revealing, yet still believe that such ordering is equivalent to primal transcendence. And though we have not yet fallen beyond recovery, the further into this way of being we slip, the closer we come to "hav[ing] to be taken as standing-reserve" (p. 332).

As an example, Heidegger (2008b) references "human resources" (p. 323), but evidence can be found in almost all areas of society. Two numbers define the identity of a university student—an ID number and the number of dollars owing in tuition and other fees. Both of these situate the student into a specific mode of standing-reserve. The ID number allows her to be easily categorised as a resource and tuition merely aids in predicting the number of resources that may be extracted from her. But this is not an issue concerning capitalism. Though capitalism can be described as a "world-view, in which the environment is atomized into 'items' (a category embracing things and persons, works of art and natural organisms), and in which every item is a commodity—that is, a discrete, portable object"

(Sontag, 2009, p. 14). This can be reliably compared to the affect enframing has on human attitudes. But the way in which humans order things around them is not contingent; it is a direct function of their belief in the absolute efficacy of their will. Thus Capitalism is *a fortiori* a consequence of the way of being in which humanity lives under enframing.

However, this can be said of any political arrangement in which the human will is venerated as well as many familiar, everyday phenomena. Heidegger (1971/2013) also includes the "total state" (p. 109) as a symptom of enframing, for it too embraces the human will. Though totalitarian states appear to rely even more heavily on it, this is only appearance. Changes in governmental arrangement do not change the hold enframing has on our way of being, whether we consider our own position or the positions of other beings. Regardless of which "proposed goals" (p. 109) are prioritised under enframing, they will always be the same at their base—objectification of all things, including humans. Humans become "human material" and natural areas and things become "raw material" (p. 109). Resources are extracted from numerous sources, whether biotic or abiotic. A piece of land, challenged-forth by enframing, becomes a place upon which to build a house and even the air becomes a reserve of nitrogen (Heidegger, 2008b, p. 320).

An apt example can be found in the forestry industry. Humans cut and remove trees, leaving some or none depending on which option is most efficient or desirable (Sustain and Protect, n.d., para 2). The harvest area is then filled with seeds in order to prepare it for subsequent harvest. This represents more than mere harvesting. The forest is left to regrow and, in time, become harvestable once again, which secures its identity as a resource to be "extracted and stored" (Heidegger, 2008b, p. 319), on hand, to be used as a source of resource flow. This process changes the identity of everything it affects. They are no longer what they were when isolated from the challenging-forth of enframing. They can only present themselves in light of our skewed understanding of our own being. They are now revealed as standing-reserve in accordance with the human will. We perceive this process as an exertion of our will over the things we choose to challenge and view the results as our own dominance.

This attitude, as rendered by environmental philosophy, can be most effectively demonstrated by considering virtue theory approaches to technological discourses. Joshua Colt Gambrel (2012) applies virtue theory in the form of "*humility*" (p. 622). When it is taken to heart, he argues, "we have an accurate sense of our abilities and achievements. We are able to acknowledge our mistakes, imperfections, gaps in our knowledge, and limitations" (p. 622). Immediately, this is recognisable as an exclusively anthropogenic solution to technological problems. To him, the only issue of import concerning technology

is how and whether humans use it. It is up to humans to decide whether they will "see all organisms as *ends in themselves* and no longer simply as means to human ends" (p. 622) or fall victim to the "harmful effects of scientific hubris" (p. 623). Because of the extreme and unquestionable power humans wield over other beings, they must be wary of how they interact with and use technological instruments, as their choices in this respect may negatively affect other organisms.

Applied to Geoengineering, regardless of the result of implementation, the cause of and basis for that result is assumed to be human agency. Any negative results will be attributed to some failure in that respect. So, whether we advocate technological "quick-fixes" (Gambrel, 2012, p. 624) or denounce them as an example of the "arrogance with which humanity surveys the natural world" (p. 625), we crown ourselves rulers while simultaneously condemning ourselves to remain unknowing instruments of enframing. Heidegger (2008b) recognises this apparently helpless situation, noting that "to push on blindly with technology or…rebel helplessly against it" effectively "comes to the same" (p. 330). Even when we condemn it, we do not understand its ground. We believe it is in our power to reverse the symptoms of enframing precisely because we believe they stem from human activities. But by compiling the "symptoms" (Heidegger, 1977, p. 48) that one perceives in technological progress, one is merely engaging in "technological behaviour," ordering these symptoms themselves into standing-reserve, never understanding their ground (p. 48). When Gambrel (2012) compiles examples of scientific hubris he is doing exactly this. Listing various events of "catastrophe, and destruction" (Heidegger, 1977, p. 48) like "DDT" (Gambrel, 2012, p. 622), "antibiotic resistance" (p. 623), and "superweeds" (p. 624) remains a product of the "human will to explain" (Heidegger, 2013, p. 177).

Breaking Free from the Abyss: Danger and Saving Power

But if we are indeed ensnared in the tendrils of enframing, used by it but unaware of such processes, is it possible to break free from such confinement? Heidegger (2008b) seems to maintain some hope of escape, portraying humans as "one[s] who [listen]…not one[s] who simply [obey]" (p. 330). Hence humans do possess the ability to listen to a different way of revealing. And though there is no doubt that egress is a difficult project—perhaps more difficult than any other—it is also the most essential project of our age. To remain in the clutches of enframing is to stand at "the very brink of a precipitous fall" (p. 332)—an irreversible loss of all identities apart from standing-reserve. But perhaps I should rephrase this. It is not as though we are on the edge of a cliff, overlooking an abyss. We are already far below ground level without even realising it. Primal transcendence is not yet beyond our reach, but nor is it in our view.

Heidegger employs Hölderlin's (as cited in Heidegger, 1971/2013) poetry to describe the abyss constituted by enframing as "the complete absence of the ground" (p. 90), to which all things owe their presence. In our current age, we linger in "a destitute time" (p. 89) without realising it. In this time, "the ground fails to come" and we "[hang] in the abyss" (Heidegger, 2013, p. 90). We have not yet, however, fallen far enough to prevent possible recognition of our situation. For if we were to look toward the distant sky in the right way we would be able to discern the light of the far off sun piercing the veil of darkness under which we reside. By "precipitous fall" Heidegger (2008b) means to say that we cannot allow ourselves to fall any further without rendering our position irreparable and causing a reduction of our own identities to mere "standing-reserve" (p. 332). The way we live now is unsustainable because we still unknowingly teeter on the edge of this danger. But our position also presents an opportunity. If we can discern the fall, we can recognise our position and hence the possibility of an escape. By jarring ourselves out of our stupor for long enough to realise our predicament, we may be able to confront the problems that plague us, and by doing so propel ourselves into an understanding out of which can grow "hope" (p. 338) of release.

Heidegger (2008b) names this hope the "saving power" (p. 334). It is, in fact, inherent in the danger of enframing itself. Hölderlin, in *The Rhine*, declares:

> But where the danger is, grows
>
> The saving power also. (Hölderlin as cited in Heidegger, 2008b, p. 333)

The precipice over which we look, then, somehow offers us the possibility of salvation. To foster a sufficient understanding of the true nature of the abyss it "must be experienced and endured" (Heidegger, 1971/2013, p. 90), we can then "look up…toward the sky" (p. 218) and discern the "radiance" (p. 224) of its light. But how is accessing this primal realm possible if we are unaware of both the fall below and the light above us? Heidegger suggests that the fall can alert us to the light. But how is this to be done? Our current encounters with the danger are as enframing's unknowing vessels. In this role we have no opportunity to inspect technology in its essence and hence cannot interrogate our own being. We go through the motions without examining them and enframing convinces us of our essential agency. In the darkness we consistently turn to the human will as our only method of deliverance because we are ignorant of any other way of revealing. As such, it is obvious that a deep understanding of the danger in enframing is impossible while we complacently reside in the dark. Heidegger agrees, remarking that "we have no right whatsoever to expect that where the danger is we should be able to lay hold of the saving power immediately and without preparation" (Heidegger, 2008b, p. 334). So, the aim

toward which we must strive is one of interrogation—"to look with yet clearer eyes into the danger" (p. 334), and subsequently recognise our own relation to something more original than enframing.

Bringing ourselves into a "free relationship" (Heidegger, 2008b, p. 311) with the essence of technology, and subsequently elucidating the danger in it as "the possibility that it could be denied to [us] to enter into a more original revealing and hence to experience the call of a more primal truth" (p. 333) uncovers something in our basic essence. It is true that humans are used by enframing to order beings into standing-reserve, but if this relationship is further questioned, it becomes clear that we have the potential to overcome our subservience. If we are the vessels of this single type of revealing, we must then have the ability to mediate others. "Revealing" (p. 335), as the general way in which truth is granted to us, "apportions itself into the revealing that brings forth and the revealing that challenges, and…allots itself to [humans]" (p. 335). While enframing—the revealing that challenges—has a grip on us, it prevents us from accessing this bringing forth or any other truth (p. 333). But in doing so, it demonstrates that humans have the potential to receive and interact with a kind of revealing apart from enframing. We are fundamentally connected to truth, and though we have forsaken this relation, we need only be reminded of our potential for primal transcendence to propel ourselves into authenticity. Once we understand this, we will understand the essence of technology and the ensnarement it exercises on us. No longer will we suffer from the delusions created by enframing. This realisation reduces our fixation with the human will to triviality and absurdity, for we can no longer consider ourselves "lord[s] of the earth" (p. 332) if we recognise our subservience to enframing.

Moving Away from Enframing: Listening and Language

This does not constitute a complete escape, for we must still aim toward a move away from enframing when we recognise its essence, but it marks the first and most important step—realising ourselves as "the one[s] spoken to" (Heidegger, 2008b, p. 332) by revealing in whatever form. It may seem, based on this discussion, that humans are helpless in this process. We are the vessels of revealing, and if we happen to be apportioned enframing rather than another more self-reflexive kind of truth we cannot change this. However, the way in which we can affect change also functions as the ultimate denial of the human will. We ourselves do not control revealing (p. 323), this much is undeniably true. But we do have the potential to exercise control over ourselves in a way that can be beneficial to our relationship with it. This is where our potentiality shows itself (Heidegger, 1953/2010b, p. 42). Our aim is to achieve a change in revealing from the limits of enframing

into a more original version, but the essence of "technology cannot be led into the change of its destining without the cooperation…of [humans]" (Heidegger, 1977, p. 39). Revealing, as the manner in which truth is apportioned, changes and adapts of own accord. In its current iteration, it has "adapted itself into enframing" (p. 38). So, because humans are the vessels through which revealing destines, we must prepare ourselves (p. 40) in order to *allow* revealing to move away from its current limits. If we are able to recognise ourselves as "needed and used" (Heidegger, 2008b, p. 337) by revealing, we will also be able to recognise ourselves as "needed and used for the restorative surmounting of the essence of technology" (Heidegger, 1977, p. 39). Because we currently linger in a state of immovable ignorance, revealing as such is also rendered immovable and incapable of change/adaptation. But an escape from our ignorance in this matter will enable a potential escape from enframing itself.

Language and Preparation

Before we can decide whether or how Heidegger's (1977) project of transcendence can be applied to environmental philosophy or any other ontic issue, we must "prepare" (p. 40) by thinking rather than acting. The opening line of his *Letter on Humanism*, questions the "essence of action" (Heidegger, 2008a, p. 217). Action, as it is defined by the human will, is evaluated with regard to practical utility—its potential for achievement. But "human achievement alone can never banish" (Heidegger, 2008b, p. 339) enframing. Thinking here retains primacy, for it "acts insofar as it thinks" (Heidegger, 2008a, p. 217). To prepare, then, is to act *through* thinking, to listen rather than speak. There are but two possible outcomes of our interactions with revealing: *nearness* or *alienation*, both of which are essentially governed by language. Language is the "primal dimension within which [we are] first able to correspond at all to Being and its claim" (Heidegger, 1977, p. 41), but we are currently alienated from it in "homelessness" (Heidegger, 2008a, p. 241). Therefore, any change in our portion of revealing requires "nearness" (p. 242). In our ensnarement we utilise explanation, description, and "frantic measuring and calculating" (p. 226) as *the* method of enquiry. These share something in common; speech. But the revelation of our predicament depends on the opposite of this. We are "spoken to" (Heidegger, 2008b, p. 332) by being as such, so we should focus on "*response*" (Heidegger, 2013, p. 182), and *listening*.

Our utilisation of language is, at present, equivalent to our treatment of technological apparatuses. Its function is defined as an "expression" of the human will (Heidegger, 2013, p. 190)—a means to an end. As a means, language is used in a "calculative business like way…with explanations and proofs" (Heidegger, 2008a, p. 223). Heidegger

describes this occurrence as the "downfall of language" (p. 222), in which "language surrenders itself to our mere willing and trafficking as an instrument of domination over beings" (p. 223). This works to further bolster our conceit and reliance on the human will. But "the human will to explain just does not reach the simple" (Heidegger, 2013, p. 177). Our relation to being is indeed simple, though we have been separated from it. Heidegger (1971/2013) asks, "that a thinking is, ever and suddenly—whose amazement could fathom it?" (p. 11). By this he means that the thinking and language, which connects us to revealing and recognises it as prime "brings no wisdom" or "salvation" (p. 183). It connects us to our own simple dwelling in our home as the vessels of the event of truth (Heidegger, 2008a, p. 242).

Both science and philosophy "measure deeds by the impressiveness and successful achievements of *praxis*" (Heidegger, 2008a, p. 263). To them, thinking must be profound and novel enough to initiate a change in its ground if it is to be considered effective in inciting change. This attitude, as a result of the hold enframing exercises on language, contributes to its inescapability and thoroughly pervades the sciences, which measure change "by the extent to which [they are] capable of a crisis in [their] basic concepts" (Heidegger, 1953/2010b, p. 9). In doing this, it traps language in a desperate, never ending search for innovation, novelty, and explication to be objectified as a mechanism for these crises. Thinking that is vetted through language such as this does not attest to our essential relationship with revealing. In its extreme simplicity it ultimately becomes "unrecognizable to us" (Heidegger, 2008a, p. 263) in our preoccupation with action in the form of explanatory and technical language.

As a result of our preoccupation with explication, one of the most problematic aspects in current technological discourse is its focus on social, political, and economic policy—even if that policy is to abolish policy altogether, or even technology—for as soon as we focus our efforts on policy changes we have already cemented our ensnarement in enframing. Such policies as environmental management, whether interested in conservation or extraction, only work to confirm our status as "tyrant[s]" (Heidegger, 2008a, p. 234) and cement our alienation. But abandoning enframing does not presuppose the abolition of technology. Even if we succeed in escaping enframing, "technology will not be struck down; and it most certainly will not be destroyed" (Heidegger, 1977, p. 38). Heidegger is adamant that "technology will not be overcome [*überwunden*] by [humans]" (p. 39). In our search for primal transcendence, we do not struggle with technological apparatuses, only with our own will. Our aim is to initiate and maintain a process wherein "technology will be surmounted [*verwunden*] in a way that restores it to its yet concealed truth" (p. 39). Technological apparatuses are used by enframing as a mechanism of control. Hence, if we

can surmount enframing these apparatuses will be restored to their true identities along with any other thing or being. Whether we deplore technology or venerate it, focusing on these issues only strengthens our fascination with the human will. Taking these concerns as primary only succeeds in demonstrating human conceit—our belief in our own dominance.

To escape this unfounded confidence, we must foster a proclivity for a "mode of listening, for the command of [revealing]" (Heidegger, 1971/2013, p. 207). Just like enframing, language is not a human activity, though we take it to be so, adding it to "the total economy of achievements by which [humans make themselves]" (p. 190). But these achievements cannot aid us in egress (Heidegger, 2008b, p. 339). We must therefore look to "human reflection" (p. 339). This presupposes a certain level of listening. Reflecting denotes *thinking*, through which we must carefully ponder the danger inherent in enframing and open ourselves to receiving the complete "appeal" (Heidegger, 1971/2013, p. 182) of revealing. Language is the medium through which this thinking can occur (Heidegger, 1977, p. 41). "Language speaks" (Heidegger, 1971/2013, p. 207), and in its speech lies the connection between human thinking and truth. But if its speech is drowned out by incessant and impulsive "utterance" (p. 195) humans alienate themselves from the only medium through which they can gain nearness to revealing (Heidegger, 1977, p. 41). Rescuing language from the human will is the first step in escaping enframing because it is the basis for thinking. As such, we must rescue language and use it to foster a thinking through which "primal correspond[ence]" (p. 41) (i.e., transcendence) and therefore access to the realm of truth is possible. Until we succeed in this, all ethical considerations reside in obscurity because such issues demand extensive clarification. At the present, our ethical discourse (whether traditional or otherwise) cannot possibly garner legitimate results because it is limited to first-order information and corrupted by our illegitimate reliance on the human will.

Environment, Ethics, and Transcendence

In light of this, what, then, is the applicability of an escape from enframing on ethical—and specifically environmental—consideration? Heidegger, in demonstrating his project as an attempt to discern things simply as they give themselves (Crowell, 2013, p. 24), also necessarily defines the outcome of egress from any incomplete account of truth. His aim is primal transcendence, to allow anything with which we interact to appear in a meaningful way, unaltered by limitations to truth. Much research has been conducted recently on this very framework as an avenue toward adapting Heidegger's phenomenology to environmental philosophy. His conception of *Gelassenheit*, often translated as "letting

beings be" (Rentmeester, 2015, p. xv) or "releasement" (Heidegger, 1944/2010a, p. xi) has excited various attempts at appropriation. The "eco-phenomenological movement" also utilises these terms, taking their combined theme as a focal point to a new "way of living" in light of Heidegger's suggestions (Rentmeester, 2015, p. xvii). However, opponents of attempts like these are quick to point out a flaw that they consider detrimental to any notion of Heidegger as environmentally conscious. His explanation of the human being as *Dasein* differentiates it from any other entity (p. xvii). He must, therefore, answer a charge of anthropocentrism.[5] Hence if he cannot ameliorate this alleged problem, we ought to cast him off as irreparably corrupted by human interest, though this would be somewhat ironic in light of his substantial denial of the human will.

I will, however, argue that Heidegger's conception of *Dasein*, though admittedly an essential differentiation between humans and any other being, does not lend itself to anthropocentrism. Heidegger's phenomenological approach to human-object interaction does indeed afford humans an explicit distinction. They are worldly in opposition to other "worldless" (Heidegger, 1953/2010b, p. 55) beings. Humans are able to understand their own being and can therefore garner meaning from the world around them. A table has meaning because it is presented to us in a meaningful way (Heidegger, 1987/2001, p. 8). The table itself, though it "exist[s] in its own way" (p. 8), it is not "*ontologically* situated in…space" (p. 9). It is solely grounded in "objective presence," which renders it inert—ready to present itself only in light of the "touch" of a being that "has the kind of being of being-in" (Heidegger, 1953/2010b, p. 55). Ontological awareness grants worldliness, and hence affords humans "being-in-the-world" (p. 56), wherein by virtue of this awareness, we also recognise our own *facticity*—the contingency of our objective presence (pp. 55-56). This framework does sound remarkably anthropocentric, especially with respect to his denomination of useful entities as defined by "*handiness* [*Zuhandenheit*]" (p. 69). However, because Heidegger's general project is that of primal transcendence, connecting him to anthropocentrism is inconsistent. Enframing is a human issue; recognising it is necessary for any kind of framework, anthropocentric or not. Heidegger's project is not to reduce all considerations to the pursuit of human interests, but rather to open up human interest to truth. To accuse him of anthropocentrism is to make the very mistake he is warning us of—to apply partial truth as primal.

To return to the issue of applicability, Casey Rentmeester (2015) considers this project a reason why Heidegger's thought is relevant to environmental ethics, arguing that

[5] Anthropocentrism "gives either exclusive or primary consideration to human interests above the good of other species" (Taylor, 1983, p. 240).

in light of his views, we can "reflect on a more appropriate relation with nature" (p. xxi). This, however, presents a problem in relation to Heidegger's own views. This paper aims at evaluation and clarification regarding the ground upon which political, social, and economic policies regarding climate change (along with any other environmental concerns) stand. This ground informs any ethical considerations that may arise from our treatment of its various aspects, which in turn informs any policy decisions. The reason for my inclusion of ontology, then, is Heidegger's aim. He is interested in achieving complete "intelligibility" (Crowell, 2013, p. 27) for beings with which we interact, for "things can no longer pierce through the objectification to show their own" (Heidegger, 2013, p. 110) under the tyranny of enframing. The extent to which things are ontologically intelligible is reflected in ethical and policy based decisions regarding *all social, political, and economic* considerations. So to employ any decision making methods without such knowledge is folly.

When Rentmeester (2015) references a "Heideggerian environmental *ethic* (emphasis added)" (p. xxi), he demonstrates a misunderstanding of Heidegger's framework. Heidegger (2008a) proves himself not only to be adverse to ethics as they are defined within the philosophical tradition, but in answer to the question "can we obtain from such knowledge [of being] directives that can be readily applied to our active lives?" (p. 259) he comprehensively denies any relevance. Any thinking that is able to access truth "comes to pass before [the] distinction" (p. 259) between theoretical and practical concerns. In other words, ethics cannot even be considered if we do not have access to things' intelligibility. This is why Rentmeester's (2015) use of *Gelassenheit* as letting beings be (p. xv) to suggest a relation to ethics is misdirected. There is no ethical connection. To let beings be is to allow them to present themselves in their truth, which means that this is merely another way of describing "restorative surmounting" (Heidegger, 1977, p. 41).

Ereignis, translated as the "event" of truth is conceptualised by Rentmeester as an "event that is to follow enframing" (p. 66). It is, then, the completion of the partial revealing we currently reside in (Heidegger, 2008b, p. 335) and can be connected reliably with the interplay between the danger and the saving power. With its complete advent, *Ereignis* will allow us to finally execute the restorative surmounting that Heidegger is so eager to reach and access the realm of truth. And though he is adamant that humans cannot alter the trajectory of the event (Heidegger, 2008b, p. 323), they can prepare by offering themselves as a possible destination by bringing themselves closer to being, finally realising their potential to be its guardians (Heidegger, 2013, p. 182). Heidegger is indeed suggesting a "new way of living" (Rentmeester, 2015, p. xvii), but if Heidegger is formulating a way of living, it must necessarily be a way of being, and therefore precedes any possible notion of

moral imperatives. To look forward toward ethics, policy, or even a complete re-evaluation of our lifestyle, the way in which we receive truth must be changed.

What results from a successful "change" (Heidegger, 1977, p. 39) is primal transcendence. It is, in this sense, the freedom Heidegger aspires to in *The Question Concerning Technology* (Heidegger, 2008b, p. 311), which Rentmeester connects to *Gelassenheit* (Rentmeester, 2015, pp. 70-71). It is a freedom from, rather than a freedom to—a freedom from the concealment enacted by enframing. Rentmeester details what he believes would be specific outcomes regarding human interaction with the environment after such a change, but such predictions cannot be reliably made. Though "Heidegger does offer a vision of a more appropriate way in which to understand the world around us" (p. 70), what is most important is "ek-sistence" (Heidegger, 2008a, p. 248). Once we ek-sist, we *ourselves* are free to interact with beings in an authentic way. Only *in light of* this freedom can we potentially let beings be, for clarity does not guarantee proper (or any) ethical consideration of what has been made clear. In fact, without this clarity, we cannot even understand what it would be like to let beings be. As long as the tyranny of enframing persists, we can only base our decisions on "first-order [ontic] inquiry" which will "never reveal [an] entity's being" (Crowell, 2013, p. 27). Whether or how we change our "comportment" (Rentmeester, 2015, p. 70) is unimportant as long as we continue to reside under this tyranny, for "transcendence precedes every possible mode of comportment in general" (Crowell, 2013, p. 27).

Conclusion

Though it is not clear whether humans are at present capable of "lending a hand to the essence, the coming to presence of Being" (Heidegger, 1977, p. 40)—whether they can reach the realm in which primal transcendence may be accomplished—is unclear. On our current trajectory, we have begun to recognise a new worrying symptom of enframing—large scale, global climate intervention. However, this issue, like any other ethical concern, cannot be tackled until we pull ourselves out of the abyss. Enframing prevents any entity with which we may interact in the pursuit of some ethical decision from presenting itself *as* itself. We cannot judge ethically and adjust policies if we do not have the proper facts. In this case, *fact* takes on a much wider definition than usual. We, in our current entrapment, are robbed of truth. When confronted by this limitation and its uncomfortable symptoms, humans have decided to look to their will as a source of deliverance. Policy decisions, changes, and even complete denials of technology are the result of this. Our will is all we can think of to rely on to mediate the concerns created precisely by our will. But none of these solutions, as long as we remain on our precarious

ledge within the abyss of enframing, are legitimate. They constitute much of the erroneous and damaging utterance, important to us only because of their status as exemplifications of our own agency. However, if we finally cast off our delusions of dominance and listen rather than speak, language will once again return to us and propel us into nearness to revealing. We must, as it were, think before we can speak. If, and only if, we succeed in doing this, can we then assess solutions to current climate change and any other technological issues without falling prey to misplaced confidence.*

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