Technology: Problems, Solutions

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In this paper, the issue of technology will be explored by looking at four different perspectives on technology: Deep Ecology's, Heidegger's, Lewis', and mine. These perspectives examine technology and come to different conclusions, which range drastically from the hands off view of Deep Ecologists to the better hands on view of Lewis. Quite a spectrum is covered between these views, though it is important to keep in consideration the view which we will not discuss, allowing technology to keep going as it has, for that view defines all the others; all these rays of ideas about solving our problems with technology stem from the belief that our current technology and our technological mindset is a problem. Hopefully, my overall view will allow a vision of the future technology, or lack of, which overcomes the apparent conflicts of solutions and offers a path to follow in order to solve our technological problem.

Deep Ecology's Take on Technology.

Deep Ecology, a radical environmental philosophy, wishes that the idea of technology never entered the heads of us Anthropocentric (only considering the interest of human beings as intrinsic) humans and therefore argue for technology's removal. They, thus, have problems with the use and concept of technology intrinsically. This position strikes in hard opposition with the more, though not completely, familiar Promethean approach of Lewis, and nears but is not identical to the essentialist view of Heidegger. It is a view which challenges the dominant worldview's belief in technology, so that technology, inherently manipulative and thus wrong will be thrown out of society by adopting a deep ecologist world view lacking need or belief in technology.
Deep Ecologists want a fundamental turn in our affairs that leads us away from technology and technical solutions to our problems. They denounce technology to such an extent that any sort of reform, they argue, contributes to the legitimacy of the technological mindset by removing the need to change our conception of technology by glossing over the appearance of problems with technology. (Lewis, p2) Although the problems appear solved, these reforms only overcome the apparent problems of technology, because technology is intrinsically harmful (Lewis, p3) and thus cannot be reformed. They want technology gone.

This condemnation of technology is rather expansive. Deep Ecologists, in contrast to the Promethean view explored by Lewis, want high technology to be abandoned and see no hope in it solving our problems. (Lewis, p7) They do support *appropriate* technology, which is very low scale and really nothing resembling modern technology at all, in passing. (Lewis, p7)

Rather than technological solutions, Deep Ecologists support a root consciousness change or shift which would remove the lifestyle which currently devastates the environment in such efficient means. The Deep Ecologist argues that our ideas and our worldview are the critical element in shaping how we handle the environment today and how we could relate to it in the future. (Lewis, p12) As Devall and Sessions state in 1985, "If enough citizens cultivate their own ecological consciousness... long range management politics can be achieved."

**Heidegger's Take on Technology**

All page cites, in this section, refer to Martin Heidegger, *The Question Concerning Technology*.

Heidegger, in his defining work, *The Question Concerning Technology*, examines, by questioning the very essence of technology, our true relationship to technology and the effects of that relationship. He comes to the view that modern technology is defined by an essence which enframes and manipulates in an inherent manner. With this manipulation
comes the danger of manipulating ourselves away from our own essences. With this danger comes the saving power of questioning technology and reformulating its essence towards a more poetical dimension.

Heidegger begins by separating technology from the essence of technology. Thus technology, which is more easily definable than the essence of technology, is separate to that essence. (p4) What must be asked, argues Heidegger, is, "what it [technology] is?" This essence of technology, defines our relationship to technology and therefore is what is relevant in the discussion of the benefits and harms of technology. (p4) He argues quite adamantly that, contrary to conventional wisdom, technology is not neutral and to believe so is dangerous for it blinds us to the actual essence of technology. (p4)

Heidegger first discusses the commonly believed essences of technology, a way of answering the question what is technology: the instrumental, or technology as a means to an end, and the anthropological, or technology as a human activity. (p5) Heidegger uniquely argues that indeed these conception of technology are correct, but they are insufficient to adequately answer the essence of technology. (p6) He says that, "modern technology too is a means to an end." This role of technology as a means to an end leads us to attempt to master it, and this tendency gains steam the more technology slips from human control, our control. (p5)

Though Heidegger buys into the role of technology as means to ends, he asks us to then define instrumentality itself, arguing that that is the only way to truly understand the essence of technology. (p6) Without this, and a corollary discussion of causation, the accepted instrumental definition of technology remains obscure and groundless, he argues. (p7)

Once looking at causation, Heidegger comes to discuss bringing-forth in which the four fold ways of occasioning (causation) defines instrumentality. Occasioning, says Heidegger, has to do with the presencing [Answesen] of that which at any given time comes to appearance in bringing-forth. (p11) Thus, occasioning is intrinsically tied to
bringing-forth. Bringing-forth is that process in which what is concealed becomes unconcealed, which rests and moves freely within what Heidegger calls revealing [das Entbergen]. (p11)

From this discussion of technology, instrumentality, causation, bringing-forth, and revealing, Heidegger comes to the conclusion that the essence of technology has everything to do with revealing, for, "every bringing-forth is grounded in revealing. Bringing-forth is grounded in revealing. Bringing-forth, indeed, gathers itself the four modes of occasioning-causality-and rules them throughout. Within its domain belong end and means, belongs instrumentality. Instrumentality is considered to be the fundamental characteristic of technology. If we inquire, step by step, into what technology, represented as means, actually is, then we shall arrive at revealing... Technology is a way of revealing." [Italics added] (p12) Furthermore, this fact of revealing ties technology to truth, because truth stems from the act of revealing. Technology comes to presence [West] in the realm where revealing and unconcealment take place, where *aletheia*, truth, happens. (p13)

Here Heidegger begins to make a contrast between modern technology and old technology. Heidegger claims that both technologies have a common essence in revealing, even modern technology (p14), but that the ruling form of revealing in modern technology is a challenging [Herausfordern], which puts to nature the unreasonable demand that it supply energy that can be extracted and stored as such. (p14) This is opposed to the older form of revealing, which meant to take care of and to maintain nature, in a stewardship fashion. (p15)

In addition to this challenging aspect of modern technology there is a setting upon element which expedites the energies of nature in two ways, in that it unlocks and exposes. (p15) The method of expediting unlocks, transforms, stores, distributes and switches the original energies of nature. This is its method of revealing. This revealing never comes to an end or stops progressing, instead it regulates the energies and thus
nature's course. This regulation is an important defining aspect of modern technology, and the regulation and securing characteristics of modern technology even become the chief characteristics of the challenging-revealing. (p16)

This controlling revealing of nature makes nature no longer an object of its own standing, but a standing reserve, which has no individuality and can only be seen in terms of instrumentality. Thus, all that is ordered by technology is standing-reserve [Bestand]. (p17) This concept of standing reserve makes technology un-autonomous and dependant upon something to order it about (p17): this something is man. (p18) Man utilizes technology's essence in order to put nature into the category of standing reserve, and thus nature, at man's hands, becomes instrumentally valued and thus devalued.

Man, however, does not have control over unconcealment itself. Man only gains his role by the extent to which he is challenged ordered to do this. Because Man is challenged more originally than are the energies of nature into the process of ordering, he is never merely transformed into standing reserve, rather he drives technology forward and he takes part in ordering as a way of revealing. But what must be kept in mind is that the unconcealment itself, within which ordering unfolds, is never a human realm, and thus man is never truly in control of ordering. (p18)

Instead of man driving forth the very ordering of self-revealing through standing reserve, man is called to the task by the force of Enframing. [Ge-stell] (p19) Heidegger defines enframing as, "the gathering together of that setting-upon which sets upon man, i.e., challenges him forth, to reveal the real, in the modern sense of ordering, as standing reserve." (p20) Thus, enframing is the base of technology and defines the technological process, but not technology in a more physical set nature. (p21)

Enframing is the gathering together that belongs to that setting-upon which sets upon man and therefore precedes any sort of relationship man has with technology. Thus, the question as to how we are to arrive at a relationship to the essence of technology always comes too late; but, the question as to whether and how we actually admit
ourselves into that wherein Enframing itself comes to presence is not too late, and actually that question is the one which needs asking, argues Heidegger. (p24)

Heidegger then begins a discussion of destining [Gescheck], the sending-which-gathers [versammelde Schicken] which first starts man upon a way of revealing. (p24) Thus, Enframing is an ordaining of destining, in that it challenges-forth into ordering.

Further, Heidegger says that Bringing-forth, poiesis, is also a destining in this sense. (p24-5) Therefore, Enframing is experienced as a destining of revealing. This means that fundamentally man is, "sojourning within the open space of destining," though this destining does in no way confine us to a stultified compulsion to push on with technology, or the opposite, a rebellion helpless against it, both of which would tie ourselves to the essence of technology. (p25-6) Here Heidegger makes an important claim, "when we once open ourselves expressly to the essence of technology, we find ourselves unexpectedly taken into a freeing claim." (p26) This is where Heidegger begins his critique of technology and a discussion of danger.

Heidegger claims that man is endangered from out of destining, and that destining, or revealing as a form of destining, brings danger in every one of its modes and there is no avoidance of this. (p26) The destining of revealing is not just any danger, but danger itself, and yet again this claim is strengthen by Heidegger's assertion that within this the mode of Enframing, it is the supreme danger. (p26) This danger reveals itself to us in two ways, argues Heidegger:

(1) As soon as Man has exhausted the realm of nature as standing reserve and all that is left is himself as orderer, he comes to the point where he himself will have to take himself as standing reserve. Thus, man becomes faceless and looses any realness as anything but instrumental, as anything but standing reserve. (p27) To add to the danger of this, this movement toward man as standing reserve cannot be seen, because man has exalted himself to the position of lord of the earth. (p27) In addition, man looses his own essence, because he stands so decisively in attendance to the challenging-forth of
Enframing that he fails to notice enframing as a claim and fails to see his part in it, and thus he loses sight of himself. By being so close to the power of Enframing, man becomes blind to himself and enframing as enframing and only sees himself as Enframing.(p27)

(2) Enframing, by being a destining, banishes man into that kind of revealing which is ordering, driving out any other mode of revealing. Most in importance, Enframing conceals that revealing of poiesis which lets what presences come forth into appearance. As Enframing attempts to control everything, it will not allow that which is inherent within objects to come out and define them. Instead, everything is ordered into places by Enframing.(p27) This includes man. These dangers of technology have already affected man in his essence, and therefore the threat of Enframing could deny man the possibility of a more original revealing and hence the experience of a more primal truth.(p28)

However, although we are threatened and have begun to experience the danger:

...Where danger is, grows
The saving power also.

The essence of technology, Enframing, is the extreme danger and therefore also holds the saving power, which is the power to fetch something home into its essence, in order to bring the essence for the first time into its genuine appearing.(p28) Thus, technology itself makes the demand on us to think in another way about what is usually understood by "essence," and hopefully we may be saved by asking this question.(p30)

Heidegger, then, sees technology as resting its essence upon an important turning point. Heidegger sees the situation so:
"It is precisely in Enframing, which threatens to sweep man away into ordering as the supposed single way of revealing, and so thrusts man into the danger of the surrender of his free essence—it is precisely this extreme danger that the innermost indestructible belongingness of man within granting may come to light, provided that we, for our part, begin to pay heed to the coming to precense of technology." (p32)

And we must not pass this point without attention as Heidegger proclaims:

"Above all through our catching sight of what comes to presence in technology, instead of merely staring at the technological. So long as we represent technology as an instrument we remain held fast in the will to master it. We press on past the essence of technology."(p32)

This is the dilemma presented. The essence of technology is therefore ambiguous. Although the Enframing pushes us into one mode of revealing which blocks out all other forms of revealing, the essence of technology also brings into focus the nature of the saving power. What is demanded is that we are conscious and question this essence.(p33)

What is needed, argues Heidegger, is that we go beyond this essence of technology by questioning it and replacing it. This is the nature of the saving power. The saving power must be of a higher essence than what is endangered, but must at he same time be parallel to it by being kindred with it.(p34) Heidegger argues that the appropriate essence here is the poiesis mentioned before. This poiesis is of the fine arts, not the arts culturally defined and common to our modern society, but the arts which reveal, as the poet who wrote of the saving power says to us ... poetically dwells man upon this earth.(p34)

Art is an area which rivals technology, but is higher than it, and therefore can replace the enframing which now defines technology.(p35)

Lewis' Take on Technology

All page cites, in this section, refer to Martin Lewis, Green Delusions.
Martin Lewis takes the position on technology that rather than technology being the source of problems, it is the solution (with modification.) This view of technology chimes in with his basic Promethean view on society which advocates the decoupling of humanity from nature in order to solve our problems. This view he contrasts to the Arcadian view of our future exemplified by Deep Ecology, which advocate a return to nature, romanticizing the primitive natural experience.

Lewis begins his argument by critiquing proponents of the Arcadian position, which he finds highly problematic and dangerous because they, in their extreme reaction against the dominant tradition, threaten to destroy that which they attempt to save, the environment.(p6) The arguments against reforms, which the practitioners of the Arcadian position advocate, Lewis sees as fundamentally risking the global ecosystem.(p7) He holds that what must be pushed is not the ambiguous utopian paradigm shift advocated by the Arcadian movement, but a concrete policy which would compromise and swell the base of support for the environment.(p12)

In the realm of technology, specifically, Lewis sees the Arcadian solutions as misguided. He argues that the appropriate technology advocated would undercut the environment and solutions to solve our environmental problems.(p7) By being unable to deal with the environment from a position of decoupled control, we set nature up for being destroyed the way it is now.

On one level, he argues that the environmental system is already very disturbed and to leave it so by abandoning technology, would just relegate it to the substandard condition it exists in now. Instead, we should use technology to restore the system.(p8) Thus, technology is necessary to develop less harmful ways of life and as a mean of progress.(p9)

On a second level, he argues that going to a low technology set up would in fact harm the environment, because it would be less efficient, especially considering our present overpopulation, and the fact that we will not be able to sufficiently curb people's consumptive appetites.(p8)
This leads Lewis to conclude in favor of technology, but a technology which is harmonized with a new environmental vision; in other words, we should put our faith in a technology which would no longer harm the environment, but could be used to fix it. (p15) This progressive technology would be valued not in an anthropocentric manner, but in a manner that would be helpful both to nature for nature's sake and to humanity for humanity's sake. (p16) by removing the bad aspects of technology from nature. (p16) These bad aspects must be removed by furthering the progress and evolution of technology, not cutting that evolution prematurely. (p19) An example of doing so would be nanotechnology (a technology dealing with incredibly small machines), which would remove technology from the environment and relieve the stress of resource demands on the environment. (p17)

This notion of technology reflects and is a microcosm for Lewis' larger view of our interaction with nature, which he advocates and calls decoupling. This notion argues that man must be separated completely from nature, so that he does not inflict his damage upon it. This separation will allow man to live for man's sake and nature for nature's sake and never the two will meet. This view neither follows the traditional view of nature being dominated by man, or the view where nature dominates man (who becomes lost as just one more species on par with bacteria, a view advocated by Lewis' termed Arcadians). (p16) Thus, we must distance rather than near nature, because without decoupling we will destroy nature. (p18)

An Alternative: Poetical Technology

Currently, we sit in fear in the middle of a crowded array of technological devices which are designed to control, designed to manipulate, and this manipulation drives out the ability to determine ourselves and thus manipulation is reaching its crushing hand to man. This is the dilemma that Heidegger poses, and it is the dilemma that defines where
we stand to day. The view which creates this problem is a view which looks at nature in a way which is concentrated on manipulation. It is a view which submits the other to control. This is the view we must question, now the answer is what we will define in the manipulative view's stead. There exist two concepts: man and nature; the question is where do we put these dichotomous objects in respect to each other.

It is not an inherent problem that our attempt to control nature will lead to nature's destruction and our own. The problem stems from the context upon which we are destined as a ship to hit upon a rock in the night, the fact that we do not know enough to control nature in a correct way, which would achieve our desired outcome. By being overwhelmed with a complex system, we attempt to change a part and segment it from the system. To do so is foolhardy and results in our destruction and the destruction of that which we attempt control.

First, we will now look at the Deep Ecologist's answer, the means of overcoming this dominant world view as they put it. This view concentrates on putting dominance upon the natural aspect of the dichotomy read above. Here man will be subject to nature. This dichotomy can be seen as two lines which run into the future. The deep ecologist asks us to bend the line of man so that it remains subject to nature, relegating man to just another species no better than any other. In this view, the whole becomes dominant and the individual human must be squelched in order to eliminate even a minor risk to the whole. This form of communalism justifies fascism and totalitarianism. It ultimately leads us into the less desirable future.

Next, we look into Lewis' handling of the dichotomy. His answer, explained along the lines of the analogy stated above, is a separation of the two lines. Letting them run into the future along parallel paths never meeting, never causing each other harm. This view allows them to cease to interact with each other and therefore determine themselves without having to compete with each other.
However, this view ignores the fundamental lesson we can read in Heidegger, the essence of technology which now pervades the technological process is one of manipulation. It is an essence of enframing, not of poiesis. Thus, technology remains a stumbling block to Lewis' vision, because it necessitate interference and manipulation, a dominance of man over nature. This point, however, does not argue the Deep Ecologists view of technology as inherently manipulative, it only argue that the essence of technology is manipulative, but Heidegger argues that this essence may be shifted and replaced by a higher essence such as poiesis. Thus technology, as is, may not be decoupled from nature.

I would argue that this nature of technology, enframing, has set upon more than technology it has set upon man, or maybe in the dominance of technology over man it has defined man. Man now exhibits this enframing attitude. Man must enframe nature, because of the impact of his mind. I agree with the deep ecologist: this view of enframing is a fundamentally modern view which has taken to enframing nature, and to stop this, it is necessary to change one's world view. To offer technological solutions, without such a paradigm shift, will only prolong the manipulation and this removes the actuality of decoupling. Thus, man, as is, may not be decoupled from nature.

Decoupling, although maybe seeming to be more practical than the Arcadian views Lewis critiques, is an impossibility to achieve, for how can we separate from nature. We will always be living in an environment, and therefore, we will always be entangled in the ecosystem; it is a fallacy to think we could do otherwise. Now, some might argue that what is important is that we can achieve a large degree of decoupling, however, we can't really, at least immediately. For the same reasons Lewis tells us that we would destroy the environment by trying to return to it, such as population and resource consumption, we would unable to substantially disengage from nature. Thus, though Lewis attempts to propose a practical solution, he fails to do so. The amount of decoupling which is possible would only serve to slow our destruction of the environment, assuming Lewis
could convince humanity to attempt to disengage, minimally and would definitely not halt the ecocide which has set upon us.

Furthermore, attempting to decouple from nature reinforces the concept of nature as the other and therefore unwittingly contributes to our ability to control. It is very easy to control something to its own annihilation, when we think of it (nature) as disengaged from ourselves. Lewis' belief in decoupling would necessarily have to incorporate some sort of mindset change which would make us unable to control others as we do so easily now. I do not see this as provided for.

Rather than decoupling, I would argue for another method of dealing with the dichotomy of man/nature. This method of handling the dichotomy would be to not recognize it, to neither make one force dominant or attempt to separate them. In this view, the two lines of the dichotomy would fuse into one, and therefore would be no distinction between man and nature, they would be one. This does not place man in a subordinate position, but one in which his destiny would be realized in a way which would not threaten the destiny of all else. For in reality, nature and man are so interconnected it is not possible to separate them, or have one dominant over an(other).

The means of doing this, transcending the dichotomy, is a tricky issue. My suggestion would be to attempt to in effect decouple the essences or future paths of beings, but at the same time recognizing the interdependence and unity of nature and man. This means that man will be allowed to expand upon his being, progress and survive, but in a way which allows other elements of the ecosystem to do so as well. This may mean a conflict and battle of futures, for example the aids crisis. In the case of aids, it would be our future to conflict with the virus and there would be a necessary conflict, and therefore it would be man's place to remove the Aids virus. This is very much a natural process, as can be seen in the continual struggle in nature on a individual level and a species level of competition. The point would be not to overstep mans place as future.
This notion described above demands that we change the essence of technology in a manner brought into discussion by Heidegger. Rather than channeling our revealing impulse to artistic endeavors, as Heidegger proposed, we must change the essence of technology from being enframing to being poiesis, we must create a technology which allows things to reveal themselves and does not order them. This form of technology gains practical illustration in such realms as informative technology, which allows individuals to expand themselves in ways which they want. This form of technology would allow that which lies within each object to come out, but would not force something out. It would be exemplified by benign agricultural technology, which would not set upon the land and reap it, but would encourage naturally suited crops to grow at a natural pace. This concept of technology would rule out the manipulative technology now in practice in such areas as agriculture, and technology that is designed to set upon nature and push it, challenge it and control its essence.

In the view I have set forth, there will be technology beyond appropriate technology, but the technology which will exist will allow us to develop ourselves and allow nature to develop itself, rather than control our development by manipulation. Curiously enough, this vision of technology will include many of the forms of high technology which are just now surfacing, which allow us to expand upon ourselves and to do so in a way which allows us the freedom to choose our destiny, while not frustrating the futures of other beings. Thus, technology will be taken into a postmodern grasp, which will use it in someways and not in others, but will always use it in a way which will be open to self determination rather than closed. To attempt to expand upon technology without this shift in essence, though similar in intent, would not adequately recognize the problem and therefore would lead to its perpetuation. As Heidegger so eloquently stated, it is necessary to question the essence of technology because questioning is freeing and by freeing we may develop a more open technology.
In conclusion, we have looked at technology from many angles and have attempted to cast forth the old technology into a new breed, which will be open to that which lies within us, our inner nature, an us inclusive of man and the environment. By allowing this freedom and self determination, we will create a society which no longer makes the hard (dys)tinction between nature and man, because their will be no other to control, we will be allowing each other, man and nature, to expand along our destinies. This, however, does not rule out conflict, because we must always remember that we are part of a system and we have no means of separating ourselves from this system. Therefore, the system's parts will come into conflict, and it will be our place to seize our destiny, maybe at the expense of another being's future.