Notes on Heidegger, "The Question Concerning Technology"

Approaching the Question of the Essence of Technology

In what follows we shall be questioning concerning technology. Questioning builds a way. We would be advised, therefore, above all to pay heed to the way, and not to fix our attention on isolated sentences and topics. The way is a way of thinking. All ways of thinking, more or less perceptibly, lead through language in a manner that is extraordinary. We shall be questioning concerning technology, and in so doing we should like to prepare a free relationship to it. The relationship will be free if it opens our human existence to the essence of technology. When we can respond to this essence, we shall be able to experience the technological within its own bounds. [3f; emphases added.]

"Questioning builds a way" of thinking through language to a "free relationship" to the essence of that which one questions.

Important Footnote: An essence is not simply what a thing is but "how it pursues its course", how it endures through time "as what it is". [3, n1; "endure" ~ "come to presence"]

Cf. traditional distinction between the essence and that which the essence pervades. Example: trees vs. That which makes every tree a tree, but which is not itself a tree. [4]

Thus, "the essence of technology is by no means anything technological." [4]

Cautionary Remark: "Everywhere we remain unfree and chained to technology, whether we passionately affirm or deny it. But we are delivered over to it in the worst possible way when we regard it as something neutral..." since this obscures its essence. [4]

Technology as a Means to an End

We ask the question concerning technology when we ask what it is. Everyone knows the two statements that answer our question. One says: Technology is a means to an end. The other says: Technology is-a human activity. The two definitions of technology belong together. For to posit ends and procure and utilize the means to them is a human activity. [4]

Two definitions of "technology"
- instrumental—a means to an end
- anthropological—a human activity

These definitions are not mutually exclusive since using something as a means to an end is a human activity.

The "Correct" and the "True" — While it's correct to say that technology is a means to an end, it is not necessarily true. But being correct is not the same as uncealing or "uncovering the thing in its essence". "Only at the point where such an uncovering happens does the true come to pass." [6]

Only the true brings us into a free relationship with the thing. [6] So we need to pursue the true nature of technology by way of the correct.

A means to an end implies a cause—that which brings about an end.
Interpreting Aristotle’s Four Causes—Four Ways of Being Responsible

Contrary to the common interpretation of Aristotle’s four causes in instrumental terms, Heidegger claims the material, formal, final, and efficient causes are the ways in which a thing is held responsible or indebted. To understand what Heidegger has in mind here, we need to focus on suggestive examples of making and the concepts he develops to give us a pre-technological understanding of the process.

We’ll start with the example of a marble sculpture of a discus thrower. In Heidegger’s terms, the statue is “indebted” to the material (marble), the form (discus thrower), and the goal (memorializing a heroic athlete). The sculptor, as efficient cause, gathers together the “aspects of indebtedness”—matter, form, and goal—and "brings forth" (poiēsis) the sculpture. Thus, the bringing or "bursting forth" happens through the artist. This distinguishes it from the bringing forth in nature (physis) of an object. In the latter case, it has the bringing forth in itself. But it’s important to note that the activity of the artist does not take place apart from the other components or causes gathered by the artist’s activity, i.e. how the work is brought forth. [9-12]

Now what is this bringing forth? How does it happen in nature and in art? Heidegger says, “The four ways of being responsible bring something into appearance. They let it come forth into presencing [An-wesen]. They set it free to that place and so start it on its way, namely, into its complete arrival.” [9] The bringing-forth “is a unified process, ‘a single leading-forth to which [each of the causes] is indebted’”. ¹

Aristotle’s Four Causes

• Material — matter (hyle) is responsible [7]
• Formal — form (morphe) is responsible [7]
• Final — goal (telos) is responsible [8]
• Efficient — maker is responsible for gathering together the other three [8]

According to Heidegger, all four are interwoven and “co-responsible” for what is made.

Albert Borgmann’s example of the wheelwright is helpful in getting the phenomena in front of us.²

• Material — wood [bottom of 44]
• Formal — wagon; the form brought forth from the wood [45]
• Final — purpose linked to the particular wood and shape of the wagon [45]
• Efficient — wheelwright works respectfully with nature (“human to nature”) [44]

Borgmann contrasts the wheelwright’s wagon with a technological device — a watch — to show that instrumental means and ends in technological production, in which the product — the what — is the only real concern, are not overriding or determining in the traditional mode of revealing and production.

The bringing-forth is also part of an unconcealing. "Bringing-forth comes to pass only insofar as something concealed comes into unconcealment [alētheia].” [11]

But what does this have to do with the essence of technology? "Everything…[for] technology is a way of revealing." [12]

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² Albert Borgmann, Technology and the Character of Contemporary Life, Chicago: University of Chicago Press, 1987. This application to Heidegger’s interpretation of the four causes was developed in Sean Kelly’s seminar course on Heidegger’s late works, Harvard Univ., 22 Oct 2008.
Technology is therefore no mere means. Technology is a way of revealing. If we give heed to this, then another whole realm for the essence of technology will open itself up to us. It is the realm of revealing, i.e., of truth. [12; emphases added.]

Technē and Epistêmē — Bringing-Forth and Revealing

There are now two things about the word technē to keep in mind.

One is that techne is the name not only for the activities and skills of the craftsman, but also for the arts of the mind and the fine arts. Techne belongs to bringing-forth, to poiesis; it is something poietic. [13]

But even more important is that technē is linked to epistêmē; it is a way of knowing, of being skilled and at home in a thing. This knowing provides an opening up—a revealing.

Thus, what is decisive in technē does not lie at all in making and manipulating nor in the using of means, but rather in the aforementioned revealing. It is as revealing, not as manufacturing, that technē is a bringing-forth.

Technology is a mode of revealing. Technology comes to presence [West] in the realm where revealing and un concealment take place, where aletheia, truth, happens. [13]

Objection — This Mode of Revealing Does Not Apply to Modern Technology

Perhaps this is only true for the ancient world of the artisan and handcrafted objects, but does not apply to modern technology and manufacturing.

Modern technology is closely related to physics as an exact science. So we might think this makes modern technology different in that it comes out of physics. But, in fact, physics also depends on technology.

Ways of Revealing — Bringing-Forth (Poiësis) vs Challenging-Forth

The way of revealing that is made possible in modern technology is not through poiësis (as a "bringing-forth") but rather a "challenging forth" (a term which suggests summoning and provoking). [13f]

The technological mode of revealing which Heidegger calls "challenging-forth" involves ordering, control, and efficiency. This is very different from poiësis in which humans are just one element in the production process.

The technological mode of revealing "puts to nature the unreasonable demand that it supply energy that can be extracted and stored as such". [14]

The revealing that holds sway throughout modern technology does not unfold into a bringing-forth in the sense of poiësis. The revealing that rules in modern technology is a challenging [Heraustordern], which puts to nature the unreasonable[?] demand that it supply energy that can be extracted and stored as such. But does this not hold true for the old windmill as well? No. Its sails do indeed turn in the wind; they are left entirely to the wind’s blowing. But the windmill does not unlock energy from the air currents in order to store it. [14]

The field, as well, is no longer "cared for and sustained", but rather it is ordered and arranged. Agriculture now becomes "the mechanized food industry". Nature is turned into disposable and interchangeable "resources", regulated, rationalized, and put at our command as "standing-reserve" ("Be-stand") — ready at hand to serve our needs and interests.
In the context of the interlocking processes pertaining to the orderly disposition of electrical energy, even the Rhine itself appears as something at our command. The hydroelectric plant is not built into the Rhine River as was the old wooden bridge that joined bank with bank for hundreds of years. Rather the river is dammed up into the power plant. What the river is now, namely, a water power supplier, derives from out of the essence of the power station. In order that we may even remotely consider the monstrousness that reigns here, let us ponder for a moment the contrast that speaks out of the two titles, "The Rhine" as dammed up into the power works, and "The Rhine" as uttered out of the art work, in Holderlin's hymn by that name.

The revealing that rules throughout modern technology has the character of a setting-upon, in the sense of a challenging-forth. That challenging happens in that the energy concealed in nature is unlocked, what is unlocked is transformed, what is transformed is stored up, what is stored up is, in turn, distributed, and what is distributed is switched about ever anew. Unlocking, transforming, storing, distributing, and switching about are ways of revealing. [16]

**Human beings** are also held in reserve. The very term "human resources" suggests as much. [18] While it is human beings who order nature through modern technology, they are implicated as well in the process.

**The Essence of Technology — Ge-stell (Enframing)**

The call or demand that gathers man "to order the self-revealing [nature] as standing-reserve" is **Enframing (Ge-stell)**. [19] This is the essence of modern technology.

But why would human beings come to think of and to treat things as standing-reserve? Heidegger attributes this to a phenomenon that "sets upon man to order the real as standing-reserve". This "setting-upon" is a process according to which "humans are ordered (bestellen), commanded (bestellen), and entrapped (nachstellen)". [Waddington, 569, emphases added.]

Enframing means the gathering together of that setting-upon which sets upon man, i.e., challenges him forth, to reveal the real, in the mode of ordering, as standing-reserve. Enframing means the way of revealing which holds sway in the essence of modern technology and which is itself nothing technological. [20]

Because the essence of modern technology lies in Enframing, modern technology must employ exact physical science. Through its so doing, the deceptive illusion arises that modern technology is applied physical science. This illusion can maintain itself only so long as neither the essential origin of modern science nor indeed the essence of modern technology is adequately found out through questioning. [23]

"As the one who is challenged forth in this way, man stands within the essential realm of [Ge-stell] Enframing. He can never take up a relationship to it only subsequently." [24]

**The “Free Relationship”**

Enframing "is the way the real reveals itself as standing-reserve". [23] This revealing is not entirely beyond all human doing, but neither is it "exclusively in man". [24] It comes about as a form of "destining". This is not to be understood as fate, but neither is it an act of individual will. It is a source of freedom when one hears and listens to the voice of destining. [25]

The essence of freedom is originally not connected with the will or even with the causality of human willing.
Freedom governs the open in the sense of the cleared and lighted up, i.e., of the revealed. It is to the happening of revealing, i.e., of truth, that freedom stands in the closest and most intimate kinship. All revealing belongs within a harboring and a concealing. But that which frees—the mystery—is concealed and always concealing itself. All revealing comes out of the open, goes into the open, and brings into the open. The freedom of the open consists neither in unfettered arbitrariness nor in the constraint of mere laws. Freedom is that which conceals in a way that opens to light, in whose clearing there shimmers that veil that covers what comes to presence of all truth and lets the veil appear as what veils. Freedom is the realm of the destining that at any given time starts a revealing upon its way. [25]

"[O]nce we open ourselves expressly to the essence of technology, we find ourselves unexpectedly taken into a freeing claim." [26]

The Danger

But at the same time, since one is pushed in the direction of the ordering of modern technology (Enframing), one runs the risk of seeing only the power of this calculable and instrumental ordering of nature.

The essence of technology lies in Enframing. Its holding sway belongs within destining. Since destining at any given time starts man on a way of revealing, man, thus under way, is continually approaching the brink of the possibility of pursuing and pushing forward nothing but what is revealed in ordering, and of deriving all his standards on this basis. Through this the other possibility is blocked, that man might be admitted more and sooner and ever more primally to the essence of that which, is unconcealed and to its unconcealment, in order that he might experience as his essence his needed belonging to revealing.

Placed between these possibilities, man is endangered from out of destining. The destining of revealing is as such, in everyone of its modes, and therefore necessarily, danger. [26]

There is always the danger that human beings will misinterpret the being of their age by placing so much emphasis on, for example, cause and effect relations that their interpretation of being overwhelms that aspect of truth as the concealed or hidden, thereby losing touch with the “open” aspect and the inherent mystery of truth. Heidegger seems to be referring to the influence of modern science on philosophical thinking going back at least to the 17th century.

In whatever way the destining of revealing may hold sway, the unconcealment in which everything that is shows itself at any given time harbors the danger that man may quail at the unconcealed and may misinterpret it. Thus where everything that presences exhibits itself in the light of a cause-effect coherence, even God can, for representational thinking, lose all that is exalted and holy, the mysteriousness of his distance.

In a similar way the unconcealment in accordance with which nature presents itself as a calculable complex of the effects of forces can indeed permit correct determinations; but precisely through these successes the danger can remain that in the midst of all that is correct the true will withdraw.

The destining of revealing is in itself not just any danger, but danger as such.... Yet when destining reigns in the mode of Enframing, it is the supreme danger. [26]

What is “the supreme danger”? It shows up in two ways.

As soon as what is unconcealed no longer concerns man even as object, but does so, rather, exclusively as standing-reserve, and man in the midst of objectlessness is nothing but the orderer of the standing-reserve, then he comes to the very brink of a precipitous fall; that is,
he comes to the point where he himself will have to be taken as standing-reserve. Meanwhile man, precisely as the one so threatened, exalts himself to the posture of lord of the earth. In this way the impression comes to prevail that everything man encounters exists only insofar as it is his construct. [27]

1. Thus, it seems to a person in the technological age that they “everywhere and always” only encounter themselves, when in truth they never encounter only themselves. [27]

Man stands so decisively in attendance on the challenging-forth of Enframing that he does not apprehend Enframing as a claim, that he fails to see himself as the one spoken to, and hence also fails in every way to hear in what respect he ek-sists, from out of his essence, in the realm of an exhortation or address, and thus can never encounter only himself. [27; emphases added.]

Thus, the danger in this limitation, viz., that the truth will remain hidden and that man will see himself as controlling nature; and in so doing, enframe human being itself as standing-reserve.

2. But, perhaps even more important is that one runs the risk of misinterpreting the being of the present age as necessary, rather than contingent.

Enframing does not simply endanger man in his relationship to himself and to everything that is. As a destining, it banishes man into that kind of revealing which is an ordering. Where this ordering holds sway, it drives out every other possibility of revealing. Above all, Enframing conceals that revealing which, in the sense of poiesis, lets what presences come forth into appearance. As compared with that other revealing, the setting-upon that challenges forth thrusts man into a relation to that which is, that is at once antithetical and rigorously ordered. Where Enframing holds sway, regulating and securing of the standing-reserve mark all revealing. They no longer even let their own fundamental characteristic appear, namely, this revealing as such.

Thus the challenging Enframing not only conceals a former way of revealing, bringing-forth, but it conceals revealing itself and with it That wherein unconcealment, i.e., truth, comes to pass. [27]

Thus, the final danger is that the essence of technology may conceal that a mode of revealing is occurring and is contingent—only one mode of revealing among other possibilities. [27f]

Art and the “Saving Power”

“But where danger is, grows
The saving power also.” Hölderlin [28]

By questioning technology we raise the possibility of freeing ourselves from the danger. Once we realize the truth of the Enframing, we may put it in its place as we also bring to light other aspects of the essence of technology.

3 “Ek-sistence” (a term coined by Heidegger) is Dasein’s “standing out into the truth of Being”, a term that marks the sense in which we are beings who are connected to Being. Elsewhere he writes: “Man is rather ‘thrown’ from Being itself into the truth of Being, so that ek-sisting in this fashion he might guard the truth of Being, in order that beings might appear in the light of Being as the beings they are. Man does not decide whether and how beings appear, whether and how God and the gods or history and nature come forward into the clearing of Being, come to presence and depart. The advent of beings lies in the destiny of Being. But for man it is ever a question of finding what is fitting in his essence that corresponds to such destiny; for in accord with this destiny man as ek-sisting has to guard the truth of Being. Man is the shepherd of Being.” [Martin Heidegger, “Letter on Humanism”.]
Every destining of revealing comes to pass from out of a granting and as such a granting. For it is granting that first conveys to man that share in revealing which the coming-to-pass of revealing needs. As the one so needed and used, man is given to belong to the coming-to-pass of truth. The granting that sends in one way or another into revealing is as such the saving power. For the saving power lets man see and enter into the highest dignity of his essence. This dignity lies in keeping watch over the unconcealment—and with it, from the first, the concealment—of all coming to presence on this earth. 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 in 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 presence of technology.

Thus the coming to presence of technology harbors in itself what we least suspect, the possible arising of the saving power.

Everything, then, depends upon this: that we ponder this arising and that, recollecting, we watch over it. [32]

Heidegger suggests that the poetic aspect of art as technē—the revealing of the true as coming to presence in the beautiful, not as standing-reserve—could give rise to poetic revealing. [34f]

The model, for Heidegger, is the art of the ancient Greeks, which provided works that revealed beings as the beings they are and focused a society around a certain understanding of being.

The arts were not derived from the artistic. Art works were not enjoyed aesthetically. Art was not a sector of cultural activity.

What, then, was art—perhaps only for that brief but magnificent time? Why did art bear the modest name technē? Because it was a revealing that brought forth and hither, and therefore belonged within poiēsis. It was finally that revealing which holds complete sway in all the fine arts, in poetry, and in everything poetical that obtained poiēsis as its proper name. [34]

“Could it be”, Heidegger asks, “that the fine arts [today] are called to poetic revealing?”

Whether art may be granted this highest possibility of its essence in the midst of the extreme danger, no one can tell. Yet we can be astounded. Before what? Before this other possibility: that the frenziedness of technology may entrench itself everywhere to such an extent that someday, throughout everything technological, the essence of technology may come to presence in the coming-to-pass of truth.

Because the essence of technology is nothing technological, essential reflection upon technology and decisive confrontation with it must happen in a realm that is, on the one hand, akin to the essence of technology and, on the other, fundamentally different from it.

Such a realm is art. But certainly only if reflection on art, for its part, does not shut its eyes to the constellation of truth after which we are questioning. [35]
Discobolus, Roman copy of a bronze original, 5th century BC. From Hadrian's Villa in Tivoli, Lazio, Italy (British Museum)