

Part I

Ancient Technology

It is especially significant, in Heidegger's eyes, that the epoch of ancient technology coincides with the time of the theory of the four causes. Indeed, for Heidegger, the distinctive outlook of ancient technology found its most explicit expression in that theory. Where causality is understood as it is in the theory of the four causes, there ancient technology reigns. Ancient technology, in essence, *is* the theory of the four causes; ancient technology is the disclosure of things in general as subject to the four causes. Heidegger's path to an understanding of ancient technology thus proceeds by way of the sense of the causality of the four causes. In particular, the delineation of ancient technology in "Die Frage nach der Technik" turns on the sense of the four causes in the locus classicus of that theory, Aristotle's *Physics*.

The four causes as obligations, as making ready the ground

Heidegger begins by repeating the names and the common way of viewing the four causes of change or motion. It is well known that the four causes are the matter, the form, the agent (or efficient cause), and the end or purpose (the final cause). The prototypical example is a statue. What are the causes of the coming into existence of a statue? First, the matter, the marble, is a cause as that which is to receive the form of the statue. The shape or form (e.g., the shape of a horse and rider) is a cause as that which is to be imposed on the marble. The sculptor himself is the efficient cause, the agent who does the imposing of the form onto the matter. And the purpose, the honoring of a general, is a cause as the end toward which the entire process of making a statue is directed. All this is well known, indeed too well known. It has become a facile dogma and bars the way to the genuine sense of causality as understood by the ancients.

Heidegger maintains that the ancients did in fact not mean by "cause" what we today mean by the term. Thus Heidegger's interpretation of the doctrine of the four causes is a radical one: it strikes down to the root, to the basic understanding of causality that underlies the promulgation of the four causes. Yet, Heidegger's position is not at first sight so very profound, since three of the causes, the matter, the form, and the end or purpose, are most obviously not what we mean today by causes. We would today hardly call the marble the cause of the statue, so there must of course have been a different notion of causality operative in Aristotle, or, at least, Aristotle must have had a much broader notion than we do.

Our contemporary understanding of causality basically amounts to this: a cause is what, by its own agency, produces an effect. Hence, for us, the cause of the chalice is not the silver but the artisan who imposes on the silver the form of the chalice. The silversmith herself is, for us, the one responsible for the chalice. She is the only proper cause of the chalice, since it is by her own agency, her own efficacy, that the thing is produced; the chalice is her product, and we even call it her "creation." Accordingly, the silversmith herself takes credit for the chalice; that is what is meant by saying that she is the one "responsible" for the chalice. She answers for it; it is entirely her doing, and she deserves the credit. For us, the silver is merely the raw material upon which the agent works; the silver does nothing, effects nothing, does not at all turn itself into a chalice. Therefore we do not think of the matter as a cause. The matter merely undergoes the action of the other, the agent; it is the patient, that which suffers or undergoes the activity of the agent. The matter does not impose the form of a chalice onto itself. The matter imposes nothing; on the contrary, it is precisely imposed *upon*. The matter is entirely passive; in the terms of the traditional understanding of the Aristotelian four causes, matter plays the role of sheer potentiality. It has no determinations of its own but is instead the mere passive recipient of the determinations imposed upon it. As utterly passive, the matter would not today be considered a cause. A thing is a cause by virtue of its actuality, and matter is precisely what lacks all actuality of its own. The matter is thus not responsible for what is done to it and does not receive the credit or take the blame for the forms some external agent has imposed upon it. The matter is therefore the complete antithesis of what we mean today by cause.

In fact, only one of the four causes, the so-called efficient cause, would today be recognized as a cause. The common interpretation of Aristotle, then, is that he did include in his theory what we mean by cause, but that is to be found only in his concept of the efficient cause. Aristotle, however, also included other factors of change or motion (the matter, the form, and the end) under an expanded concept of cause. On this understanding, the concept of cause is therefore not a univocal one in

Aristotle: the silversmith and the silver are not causes in the same sense. They do both contribute to the chalice, but the one acts and the other is acted upon; these may conceivably both be called causes, but only the efficient cause is a cause in the proper sense. The silver is a cause in some other, improper sense, a sense we today feel no need to include under our concept of cause.

Heidegger's position is that for Aristotle the four causes are all causes in the same sense. And that sense does not correspond to *anything* we today call a cause. In particular, Aristotle's so-called efficient cause is not in fact what we today mean by cause; that is, what Aristotle speaks of cannot rightfully be called an efficient cause: "The silversmith does not act . . . as a *causa efficiens*. Aristotle's theory neither knows the cause that would bear this title nor does it use a correspondent Greek term for such a cause" (FT, 11/8).

This says that even the so-called efficient cause is not understood by Aristotle and the Greeks as the responsible agent, as something that produces an effect by its own agency. The Greeks do not know the concept of efficacy or agency as that which imposes a form onto a matter. Correspondingly, change or motion does not mean for the Greeks the imposition of a form onto a matter by an external agent. Furthermore, since change is not the imposition of a form, ancient technology will not be an affair of imposition either.

What then exactly does Aristotle understand by a cause, such that all four causes can be causes in the same sense? In particular, how can both the silver and the silversmith be included in the same sense of cause? According to Heidegger, in the first place, the Aristotelian distinction between the matter and the agent is not the distinction between passivity and activity. Aristotle did not understand the matter as entirely passive nor the maker as entirely active. In other words, the matter is not that which is imposed upon, and the maker is not that which does the imposing. To put it in a preliminary way, we might say that the matter actively participates in the choice of the form; the matter suggests a form to the craftsman, and the craftsman takes direction from that proffered form. Accordingly, the matter is already pregnant with a form and the role of the craftsman is the role of the midwife assisting that form to come to birth. Instead of an imposed upon and an imposer, we have here something like a mutual participation in a common venture, a partnership where the roles of activity and passivity are entirely intermingled.

Heidegger expresses this interpretation of causality by saying that the causes are for Aristotle the conditions to which the produced thing is obliged. *Obligation* is the one common concept by which all four causes are causes in the same sense. The thing produced is indeed obliged to the various conditions for something different in each case, but the general

relation of obligation is the same. What then does Heidegger mean by obligation in this context?

Heidegger's German term is *Verschulden*. This word has a wide range of meanings, but it is only one particular nuance that is invoked here. The term is derived from the ordinary German word for "guilt," *die Schuld*. Therefore Heidegger has to say explicitly that he does not mean *moral* obligation in the sense of being guilty for some lapse or failure. Furthermore, the term *Verschulden* also possesses the connotation of "responsibility." Again Heidegger rejects this sense: he does not mean here responsible agent, that which brings about an effect by its own agency and so personally takes the credit for that effect. We might say, then, that what Heidegger rejects is both the passive (being guilty for some failure) and the active (responsibility as effective agent) meanings. The sense he is invoking will in a certain manner lie between, or partake of both, activity and passivity.

Perhaps the nuance Heidegger is seeking is expressed in our colloquial expression of gratitude, "Much obliged." What do we mean when we say to another person that we are much obliged to him or her? We mean that that other person has fostered us in some way or other. Specifically, we do not mean that we owe everything to that other person, that that other person *created* us, but only that he or she has "helped us along." The other person has not been so active as to bear the entire responsibility for what we have done or have become, nor has the other person been totally passive. The other, in a certain sense, has neither acted nor failed to act. Our being obliged to the other amounts, instead, to this: he or she has provided for us the conditions out of which we could accomplish what we did accomplish, i.e., the conditions out of which our own accomplishment could come forth. We are much obliged to another not for creation, or for taking away our accomplishment by accomplishing it himself or herself, but for abetting us in our own accomplishment.

That is the nuance Heidegger is trying to express: the four causes are ways of abetting. The thing produced is obliged to the four causes in the sense that the causes provide the conditions, the nurture, out of which the thing can come forth. The causes make it possible for the thing to emerge out in the open, the causes may even coax the thing out, but they do not force it out. The causes are not "personally" responsible for the thing: that means the causes do not effect the thing by their own agency, by external force. All the causes do is to provide the proper conditions, the nourishment, the abetting, required by the thing in order to fulfill its own potential. The causes do not impose that fulfillment, do not force the desired form onto the thing, they merely let that fulfillment come forth, in the active sense of letting, namely abetting.

Thus the fundamental difference between Aristotle's understanding of cause and our current understanding is that between nurture and force, letting and constraint, abetting and compulsion. That is why for Aristotle there

can be four causes and for us there is only one. A chalice can be obliged to the matter, the silver, but cannot be forced into existence by it. If causality is force, then there is only one cause—since the force must be applied by an active agent. If, instead, causality means nurturing, then not only the craftsman, but also the matter, the form, and the purpose may all be causes—by way of providing required conditions. These each provide a different condition, but the sense of their causality is the same: i.e., precisely the sense of abetting or nurture, of providing a favorable condition. The four causes, therefore, are all causes by virtue of being obligations of the thing produced; it is “much obliged” to all four of them. But the thing has *no* efficient cause in the sense of an external agent to which it owes everything, by which it was compelled into existence. Nothing external forced it into existence, but it did receive assistance in coming to its own self-emergence. That is Heidegger’s radical understanding of the doctrine of the four causes: the causality of each of the causes, including the so-called efficient cause, is a matter of abetting only, not imposition.

Two general questions immediately arise regarding this reading. In the first place, where in Aristotle does Heidegger find this understanding of causality; i.e., what is the textual basis in the Aristotelian corpus for Heidegger’s interpretation? Secondly, where in Heidegger do *I* find that this is in fact his understanding; i.e., what is the textual basis in Heidegger for this interpretation of Aristotle? These questions arise because the answers are by no means obvious, especially to anything less than the closest possible reading.

The so-called efficient cause in Aristotle

Let us begin with Aristotle. Heidegger simply does not say where in the Stagirite he finds this understanding of causality as abetting. We therefore need to look for ourselves and see if Heidegger’s interpretation is borne out. Since the central issue is the way of understanding the so-called efficient cause, we will make that cause the focus of our inquiry. If the “efficient” cause amounts to abetting, then the others do *a fortiori*.

As we read the passages in Aristotle’s *Physics* where this cause is in question, we immediately notice that Heidegger was right about one thing at least, namely that the Stagirite does not at all use the term “efficient cause.” In fact, Aristotle hardly gives this cause a name at all; any translation that settles on a definite name, such as “efficient cause,” is merely an interpretation, one which may or may not capture the proper sense. I shall myself propose a name for this cause, but the name must come only after the attempt to grasp the sense. At the start, a defining name would merely prejudice the inquiry.

issue one way or another, however, we shall have to have recourse to the actual examples Aristotle provides. It is precisely in his choice of examples that Aristotle expresses his sense of causality, his sense of the “whence.”

Aristotle provides three main sets of examples of this cause. In the first introduction of it as the whence or the source of the motion, Aristotle explains himself as follows: “For instance, counseling is this kind of cause, such as a father counsels his son, and, on the whole, the maker is this kind of cause of the thing made” (194b31). The second set of examples occurs a few lines down: “The sower of seeds, the doctor, the counselor, and, on the whole, the maker, are all things whence the beginning of a change emerges” (195a22). The final example is introduced when this cause is called the first *κινήσαν*, “the first setting into motion.” Aristotle illustrates: “For instance, why did they go to war? Because of the abduction” (198a19).

These are the examples from which we have to gather the sense of the causality that has come to be called—but not by Aristotle himself—“efficient causality.” The paradigm case of such causality was taken—after Aristotle’s death—to be the maker, the craftsman, and, very often, in particular the sculptor. The other instances of this type of cause, for example, counseling, were indeed always recognized as belonging within efficient causality but as derived forms, remote ones, ones to be understood by reference to the paradigm case. The pure case is the sculptor, the one who, as it seems, by himself imposes a form onto a matter.

We see from Aristotle’s examples, however, that such a maker is not at all the Stagirite’s own paradigm case. He does not place the maker first; and we may suppose that Aristotle does place first that which deserves the first place, that which is the prime instance. In fact, Aristotle suggests that the maker belongs to the list of examples only if we speak roughly, generally, on the whole. The maker is the derived form, and the pure cases, the paradigms, are counseling, sowing, doctoring, and abducting.

Now it is only in one particular sense that these can be called “the whence” of the motion: they are that which rouses up the motion, or releases the motion, but not that which produces motion by its own efficacy or agency. To counsel someone is not to force him or her into action; it is not to be the agent of the action, for that remains the other’s action. Nor, of course, is it to do nothing; it is to encourage the other, urge her on, rouse her up. To counsel is to appeal to the freedom of the other, not to usurp that freedom.

For Heidegger, counseling, in its genuine sense, is equivalent to caring:

In the word “counsel,” we now hear only the more superficial, utilitarian meaning of counsel: giving advice, i.e., giving practical directives. In the proper sense, however, to give counsel means to take

In Book II of the *Physics*, Chapters 3 and 7, Aristotle designates this so-called efficient cause seven times. The designation is somewhat different each time, but there is one key word that occurs in a majority of the formulations. This word is not really a name, or, if it is, it is the most indeterminate name possible. That is to say, the word leaves the determination of the nature of this cause open; it only points out the direction in which to look for the proper determination. This word, which is Aristotle's most characteristic way of referring to the so-called efficient cause, is in fact not a name, a noun, but a relative adverb used substantively. The word is *ὅθεν* (*hōthen*), a simple term which means, as a substantive, "that from which" or "the whence."

Aristotle's various designations then become variations on the notion of this cause as "the whence of the movement" (195a8). For example, it is called "the first whence of the movement" (198a27), "the whence from which arises the first beginning of the change" (194b30), and "that whence the beginning of the change emerges" (195a23). By calling this cause merely "the whence," Aristotle indicates where we are to look for it, namely by following the motion to its source. But nothing is thereby determined as to how the source is to be understood. That is, it is not stipulated in advance how the motion proceeds from its source; in particular, it is not said that the source is the efficient cause of the change or motion. Our inquiry into the nature of causality in Aristotle therefore cannot stop at these designations; they are entirely open.

Aristotle also provides three designations (198a19, a24, a33) which do not employ the word "whence." We find there instead something closer to a proper name, namely the term *κινῆσαν* (*kinesan*). Yet it is quite uncertain how this word is to be taken. It is the neuter aorist participle derived from the verb meaning "to move, set agoing, stir up, arouse, urge on, call forth." The word *κινῆσαν* thus actually expresses little more than "the whence"; it means in the most literal and neutral sense, "the first setting into motion" or "that from which the motion first derived." The word then actually adds nothing to the initial designation as the whence, since it also leaves undetermined how the whence is related to the motion. It certainly does not say that the whence is the efficient cause of the motion, that the whence is a force imposing the motion. As far as the name goes, this cause is simply, in some way or another, at the head of the motion, the source of the motion. But a thing may be a source of motion in many different senses; for example, a thing may impose the motion or merely arouse it, urge it on. The efficient cause, properly so called, is a source in the former sense; it effects or imposes motion by its own agency. According to Heidegger, however, the proper sense of causality in Aristotle is the latter one: not efficiency (imposition by one's own agency), but abetting, fostering, encouraging, arousing. Since the name does not determine the

into care, to retain in care that which is cared for, and thus to found an affiliation. Ordinarily, to give counsel means almost the opposite: to impart a directive [or, today, to prescribe a psychoactive drug] and then dismiss the one who has been counseled. (*HI*, 41/34)

If Heidegger is correct, then Aristotle's example of the father as a counselor is especially well chosen. The father is precisely the counselor who takes the counseled one into his care, retains him in care, and never dismisses him. The father is the prototype of the counselor, so much so that to be a counselor is to be a father, and vice versa: to be a father is not simply to beget an offspring but to care for him (or her), raise him, counsel him, and so beget another man. Thus for Aristotle, a father, as a man who begets a man, is a cause of the type under consideration. But that does not make the father an efficient cause. On the contrary, "to beget a man" must be taken in its full sense: to beget a real man, a fully developed man, and that requires care, affiliation, counsel, all of which are matters not of force but of nurture. Thus a man is not the *efficient* cause of another man but the *nurturing* cause.¹

To consider for a moment Aristotle's other examples, sowing seed obviously does not make the corn grow in the sense of forcing the corn up. Corn cannot be forced. To sow seed is merely to provide the right conditions for the corn to arise. To sow is, in a sense, to encourage the corn to grow, to call it forth into action, to release its potential for growth, but it is not to bring about that action by one's own agency. The corn has to have it in itself to grow, or else sowing and nurturing will be of no avail. Sowing is thus not an efficient cause; it does not impose growth but only prepares or abets it.

Likewise, doctors (at least the doctors of Aristotle's time) do not cause health by their own agency. The doctor merely prescribes the right conditions for the body's natural health to reassert itself. Nature heals; the doctor is only the midwife to health. Aristotle's example of doctoring is then not an example of efficient causality but of abetting causality.

In a perfectly analogous way, an abduction is not an efficient cause of war; it does not by itself force the offended parties to declare war. All it does is rouse them, stir them up, or perhaps merely release their latent hostility, but they themselves freely respond to this perceived provocation by going to war—or not.

It is then clear that Aristotle's paradigm examples of this kind of cause are by no means instances of imposing a form onto a submissive matter. For Aristotle, this so-called efficient cause is in fact not the responsible agent, the one which, supposedly, by its own efficacy brings about the effect. This cause is not an efficient cause but instead, as Aristotle's examples make very plain, a cause that is efficacious only by act-

ing in partnership with that upon which it acts. There must be some change or product latent in the matter, and this cause amounts to assisting that change or product to come to fruition by releasing it or arousing it. Without the cooperation of the matter—i.e., without the potential for activity on the part of the matter—the efficacy of this cause would come to naught. Since this cause amounts to a releasing, there must be some latent activity to be released. Or, in terms of rousing, this cause requires some counterpart which can be roused. The point is that this cause does require a genuine counterpart, a genuine sharer in a common venture; both parties must be agents, both must play an active role. An efficient cause may perhaps impose a form onto a passive stone, but Aristotle's examples point in the direction of abetting, and that requires another agent rather than a patient. Abetting is directed at something that can actively take up the proffered aid, not at something that would passively undergo a compelling force.

In Aristotle's paradigm examples, the roles of activity and passivity are entirely intermingled. They are instances of genuine partnerships in which each party is both active and passive; each party gives direction to and takes direction from the other, and it is ordinarily extremely difficult to say on which side the absolutely first action lies. Consider the case of the abduction and the war. Is the abduction merely a pretext for going to war, or is it a genuine provocation, a genuine motive? That is, which side begins the war? It would be almost impossible to say, since there is no such thing as a provocation or a motive in itself. A motive obtains its motivating force only by means of the decision made by the motivated person to recognize it as a motive. A motive is *nothing* if it is not accepted as a motive. Nor is any action in itself a provocation; even an abduction becomes an abduction, i.e., a provocation, only if it is taken as such by the provoked party. Thus it is the reaction to the abduction that first makes it be an abduction properly so called (and not a neutral picking up and transporting). A provocation becomes a provocation only when the provoked party confirms that it has been provoked. When will the provocation be sufficiently grievous to call for war? Precisely when, by declaring war, the offended party takes it as sufficiently grievous. In other words, it is the declaration of war that makes the provocation a provocation, and we could say that the war makes the provocation as much as the provocation makes the war. Thus it is impossible to provoke into war a nation that refuses to be so provoked, and provocation can therefore not be an efficient cause of a war. It can only be a rousing cause, one which merely, as Shakespeare says, "wakens the sleeping sword of war." Only what is sleeping—i.e., potentially awake—can be wakened; wakening cannot be imposed on something that lacks the potential for it. The ones provoked into war, then, must be both passive and active; they must

be presented with an occasion to make war, and they must actively take up that occasion and make it effective as a motive for war.

The same activity and passivity are to be found on the side of the provokers. What shall they do to provoke their enemies into war? Indeed they will have to act in some way or other. In one sense, then, they begin the war; they take the first step, and they are the source of all the motion which is the war. But in another sense, they take direction from their enemies, and their action is in reality a *response* to their enemies. Thus they are not the *absolutely* first beginners of the war. They take direction from their enemies in the sense that their provocative act must spring from a knowledge of their enemies. Their provocative act must be appropriate to their enemies. For example, whom shall they choose to abduct, or how many do they need to abduct? If they wish to start a war, they must know exactly how far their enemies can be pushed before those enemies will consider themselves sufficiently provoked to engage in hostilities. Thus the provokers are responding to their enemies as well as acting on them.

Abetting, too, presupposes such a genuine partnership, where activity and passivity occur on both sides. Abetting is not an efficient cause, where all the agency lies on the one side and all the passivity on the other. In the first place, it is obvious that, by itself, abetting or nurturing is nothing. That is, it is nothing to one who cannot respond to the abetting; it is not possible to counsel a stone. For there to be abetting, there must be activity on the part of both the abetter and the abetted. Likewise, there must be passivity on both parts; the abetted has to receive the abetting, but the abetting has to be appropriate. That is, the abettors have to receive direction from the possibilities of development on the part of the abetted.

Counseling is a prime example of this intermingling of activity and passivity. The counselor has to take direction from the one she is counseling, as much as she has to give direction to him. That is why Aristotle's example of the father counseling his own child is, again, very happily chosen. The counselor must know intimately the one she is to counsel. The counseling must be appropriate to the one counseled, which is to say that it must not only be directed *to* the counseled but must take direction *from* the counseled. Thus the counseled rouses up the counseling nearly as much as the counseling rouses up the counseled, and it is extremely difficult to say on which side lies the absolutely first beginning, the absolutely first whence.

Perhaps this peculiar intermingling of activity and passivity, agent and patient, directing and directed, is the reason Aristotle's formulations of this cause become so convoluted. For instance, while he begins by asking simply about the whence or the source of the motion, he comes to formulate this cause as "the whence from which arises the first beginning of the change" or "that whence the first beginning emerges." In other words,

Aristotle comes to ask not merely about the first source but about the source of that source. In seeking the whence *of* the first beginning, Aristotle is thus seeking the beginning of the beginning or the whence of the whence, an inquiry that obviously would keep getting deferred to an earlier whence. There is no absolute, definitive first whence—that is what is expressed in Aristotle’s reflexive formulations of this cause. Now I maintain that there is reflexivity in these formulations precisely because there is reciprocity in the cause that abets. That cause does indeed have a whence of its own, since it must be appropriate to that which it abets, i.e., must receive its direction from the object’s possibilities of being abetted. If the whence amounts to rousing or releasing rather than imposing, then to speak of the whence does inexorably lead to speaking of the whence of the whence. That is, it leads to the necessary partnership between the rousing and the aroused, in which the cause relates not to a passive matter but to an active one, whose possibilities of action must be taken into account by the rousing agent. With a rousing cause, it is well-nigh impossible to determine the absolutely first source of the action, since the actor and the acted upon are mutually implicatory and take direction from one another. The counselor has to take counsel from the counseled, and the motive has to take its motivating power from the motivated. Is it the nurturing that calls forth the nurtured, or the nurtured that directs the nurturing? The answer is both, and thus neither one is absolutely first, which therefore accounts for the reflexivity in Aristotle’s formulations of the whence, where the whence gets deferred into a prior whence. By posing the question of the cause the way he does, Aristotle is suggesting that there is reflexivity or partnership in this cause. Thus both Aristotle’s examples and his very formulation of this cause indicate that he does not mean an efficient cause but a rousing or nurturing cause.

Yet even if Aristotle’s paradigm examples do involve a partnership, an abetting, which prevents us from taking the sense of causality in play there as efficient causality, nevertheless Aristotle also includes the maker in his examples. Then what about the maker, the artisan, the sculptor? Is such a one an efficient cause, or is she to be understood in the sense of a nurturing cause, as in the paradigm cases? Is there the same partnership between the artisan and her material? Does the maker impose a form onto the matter, or does the matter impose a form onto her? Who or what determines the form of the sculpture: the marble or the sculptor?

Today, by means of lasers, practically any form may be imposed onto any matter. A laser beam is indifferent to the matter; nothing can stop a laser from its predetermined, preprogrammed efficacy. The matter makes no difference to a laser, and it, or its program, is the absolute first whence, the absolute beginning of the motion or change. Here we encounter an efficient cause in its pure state.

But let us take a traditional sculptor, such as Michelangelo. Is he to be understood as an efficient cause or, rather, as a midwife? That is to say, does he impose a form onto a submissive matter, or does he take direction from the matter and merely assist at the birth of the statue with which the particular block of marble is already pregnant? We have Michelangelo's own testimony that the latter is the case. He claimed that the task of a sculptor is merely to chisel away the extraneous bits of marble so as to expose the statue already present within. The sculptor, in other words, does not impose form, he merely allows the form to emerge by *releasing* it. He takes direction from the marble, determining what the marble itself wants, as it were, to bring forth. His activity is then to nurture that form into existence. He is so little an efficient cause that it is impossible to say whether his action calls forth the statue or the latent statue calls forth his activity.

In this way, the maker, the artisan, the supposed paradigm of an efficient cause, can be understood as a derived form of the paradigm case of the abetting cause. An artisan can be understood as a midwife rather than an imposer. If we think of any maker or craftsman not as a laser beam but as a Michelangelo, as a respecter of the material on which she works, then the maker is not an efficient cause but is instead, like the counselor, a nurturer, an abetter. That is precisely Heidegger's interpretation of ancient causality; for the ancients, to be a cause meant to respect and abet. Furthermore, that respectful outlook constitutes the essence of ancient technology; ancient technology is the disclosure of things in general as there to be respected. The practice that issues from this theory then amounts to abetting or nurturing, as we will see when we examine Heidegger's account of handcraft. For now, we merely need to ask whether his interpretation is true to Aristotle.

Heidegger has been accused of violence in his interpretations of the ancients, but here the evidence points to his view as the faithful one. In contrast, the traditional imputation of the notion of efficient causality to Aristotle surely appears to be violent. After all, Aristotle himself twice places the maker last in his list of examples, and on the third occasion (the example of the abduction) he does not include the maker at all. Moreover, Aristotle also distances himself from the maker by stating explicitly that the maker fits within the list of examples only roughly, only if we speak in a general way or on the whole. In other words, Aristotle is expressing quite unmistakably his view that the maker is not the best example. The craftsman does not best illustrate the whence of motion, as that whence is understood by Aristotle. The better example is the counselor or the sower of seeds. That is Aristotle's order, and Heidegger's interpretation is the one that is respectful of that order. To take the maker as the paradigm is to be unfaithful to Aristotle, and to proceed to inter-

pret the maker as an efficient cause is to be doubly violent to Aristotle. Thus we find that the evidence points in the direction of Heidegger's position that both the name and the concept of efficient cause are foreign to Aristotle. It perhaps remains to be seen whether Heidegger can fully work out the alternative notion of causality, but at least we can appreciate the justice of his attempting to do so.

Before returning to Heidegger, let us now summarize the ancient view of causality as expressed in the doctrine of the four causes. First of all, we reject the efficient cause as one of the four. That name is not appropriate to what Aristotle himself understands as the source of motion, namely an arousing or a releasing. Then if I were to propose a new name, guided by what is hopefully a more adequate grasp of Aristotle's sense of this cause, I would call it the "rousing cause," the "nurturing cause," or, at the limit, the "nudging cause."² And with regard to causality in general, the one single concept by which all four causes are causes in the same sense, it could be called abetting or (active) releasing. Heidegger's term "obligation" is meant to express the same sense of providing favorable conditions, assisting at birth, midwifery, ob-stetrics. The antithesis is imposition.

Let us raise one final question within the framework of the ancient doctrine of the four causes: when and why did it happen that the paradigm instance of causality became efficient causality and causality in general came to be understood as imposition? It occurred not long after Aristotle's death. Surely, by the medieval era the notion of rousing causality is completely overshadowed by efficient causality. (And the latter is then reinterpreted back into Aristotle. The "whence" of Aristotle is, from medieval times down to our own, translated as "efficient cause," a perfect example of digging up merely what one has already buried. In fact, until Heidegger, the notion of efficient causality as an authentically Aristotelian notion is never even questioned.) In the medieval age, efficient causality indeed plays a central role in philosophy. For example, the notion of efficient causality, rather than releasing causality, is the basis of one of Thomas Aquinas' famous five ways of proof for the existence of God. In fact, this way of proof amounts to an extension of the notion of efficient causality to God, who becomes the ultimate efficient cause; and Being, to be in general, is understood as meaning to participate in some way in efficient causality. Nevertheless, medieval philosophy is not totally divorced from Aristotle's conception of causality, and the doctrine of the four causes remains intact there (although causality is not understood in the original Aristotelian sense). Indeed, the final cause is the basis of another of Thomas' five ways of proof. In the modern age, however, the final cause, the material cause, and the formal cause are laughed out of court, and so is the notion that matter may be pregnant with a form

and thereby deserving of respect. Only the efficient cause is allowed, and the notion of causality in general as imposition is solidly entrenched. It is true that some modern philosophers were skeptical about our knowledge of any causal connections among things. What these thinkers rejected, however, was not the sense of causality as imposition, as efficient causality, but the possibility of our human intellect ever knowing the causal connections among things. These philosophers were precisely skeptics, not reinterpreters of causality. Thus in the modern age, the sense of causality as imposition, a sense slowly brewing since the death of Aristotle, holds complete sway.

What does this change in the understanding of causality amount to in terms of Heidegger's history of Being, the domain of the original, motivating events? It is a reflection of the withdrawal of Being; or, more precisely, it is a response to that withdrawal. It is what the gods leave behind in their flight. When Being veils itself, when the gods abscond, then humans are left with a distorted sense of what it means to be in general, and in particular a distorted sense of nature. They might then see nature as what is there to be imposed upon and might view causality as imposition. Impositional technology is thus motivated by the flight of the gods and is accordingly, for Heidegger, not a matter of human failure but, instead, a fate.

Having exposed the sense of causality in Aristotle, we can now understand better the sense of this fate. That is, the causality in play here, by which the withdrawal of Being "causes" modern technology, must be the Aristotelian sense of causality, namely abetting or releasement. Therefore, the fate is not one imposed on human beings, as if they were passive and bore no responsibility for their fate. Heidegger is not exempting humans from responsibility for their fate. He is in no way a "fatalist"; he is not suggesting that humans simply wait and hope for the best. Human beings are not passive matter to be imposed upon by Being. The history of Being, the approach or retreat of the gods, does not impose anything on humans. The gods are indeed the prime movers, but all movers must take direction from the possibilities latent in the ones to be moved.

That is why Heidegger is entirely consistent to call the modern age a fate and to claim that only a fate will overcome it, while, at the same time, urging greater human resoluteness and watchfulness. Heidegger does not absolve humans from responsibility; he heightens human responsibility in the sense of moral responsibility. What he deflates are the pretensions of humans in the power of their own efficacy. If humans think they are the only ones responsible for their accomplishments, if humans think they are efficient causes, if humans think their productions are their creations, then Heidegger's philosophy is ready to expose those claims as pretensions. The concept of responsibility may involve either blame or credit; Heidegger heightens human responsibility insofar as humans can be

blamed, and he diminishes responsibility insofar as humans deserve credit. The blame (the moral responsibility) is humanity's own, the credit (the claim to be personally responsible for some accomplishment, to have accomplished something by one's own efficacy) must be shared (with Being or nature). Heidegger's philosophy is, therefore, just as Sartre characterizes existentialism in general, a most austere philosophy and has nothing in common with inaction or moral laxity.³

Abetting causality as a reading of Heidegger

We arrive now at the second of the two general questions we raised concerning Heidegger's view of causality as understood by the ancients. We have shown a textual basis in Aristotle for Heidegger's interpretation; i.e., what we asserted as Heidegger's view is borne out through a close reading of Aristotle. The task is now to return to Heidegger's essay on technology in order to see how Heidegger himself presents and develops his interpretation. Causality, as understood in the doctrine of the four causes, means, most fundamentally, for Heidegger, abetting or nurturing. Its antithesis is imposition—i.e., force, compulsion. Yet it is by no means apparent on the surface of Heidegger's text that this is indeed his understanding. Rather than express himself with an immediate, facile intelligibility, his strategy is to introduce a whole series of terms, each of them highly nuanced, in order to clarify his position by their cumulative effect. Yet the nuances are easily overlooked or mistaken, even by a reader of the original German, and they are very difficult to bring out in a translation. Nevertheless, if we approach Heidegger's text as deserving of the same care required to read Aristotle, these nuances will yield themselves up.

In the published English translation of "Die Frage nach der Technik," the series of terms in question is the following: "being indebted," "being responsible," *hypokeisthai*, "starting something on its way," "occasioning," "inducing," *poiesis*, "bringing-forth," *physis*, "revealing," and *aletheuein*. These are the terms in which Heidegger couches his understanding of ancient causality and ancient technology. At first sight, a very mixed bag.

Let us begin with Heidegger's most general sense of causality, as understood within the context of the four causes. We said that Heidegger takes causality there as obligation, in the specific sense that the causality amounts to something in between the extremes of compelling and doing nothing. The four causes are not ways of imposing or forcing change, and neither do they play a merely passive role. The four causes *let* the change come about—in the active sense of letting, namely: nurturing, releasing, abetting, providing the proper conditions, encouraging, nudging, rousing.

The four causes are not “responsible” for the change, in the sense of taking all the credit for it. Conversely, the change does not owe everything to the causes. The obligation in question is the specific one of indebtedness for assistance in coming to one’s own self-emergence or in achieving one’s own accomplishment. This sort of obligation, I take it, is what is meant in colloquial English by saying we are “much obliged” to someone.

This term, “obligation,” Heidegger’s *Verschulden*, is rendered in the published translation variously as follows: “being indebted,” “being responsible,” “being responsible and being indebted,” and “owing and being responsible.” Part of the difficulty is indeed that the reader of these terms will hardly realize that Heidegger has a single unified concept of causality at all. More to the point, however, the term “being responsible” is quite misleading, especially when applied to the four causes taken together. For instance, the translation says on page 9: “According to our example, they [the four causes] are responsible for the silver chalice’s lying ready before us as a sacrificial vessel.”

This surely gives the impression that the four causes, acting in unison, have brought it about that the chalice is lying there ready before us, i.e., already made and ready for use. It makes the chalice the effect of the causes, ready-made by the four causes, delivered up and ready for use. This impression is unfaithful to Heidegger’s intention in two ways: in the first place, Heidegger does not maintain that the effect of the four causes is to produce something ready-made; nor, secondly, is the activity of the four causes to be understood as an effectuating at all.

The phrase “lying ready before us” and, in the next line, the phrase “lying before and lying ready” translate Heidegger’s *Vorliegen und Be-reitliegen*. These translations are defensible grammatically, but they are not defensible philosophically, especially since Heidegger immediately places in parentheses the Greek term he is attempting to render. That term is *ὑποκεῖσθαι* (*hypokeisthai*). The sense of this word for Heidegger is “to lie underneath.” It means to be the prepared ground for the appearance of something. It does not refer to what is ready-made but to the making ready of something; it does not refer to something appearing but to the condition of an appearance of something. Specifically, the word “ready” in “lying ready” does not mean ready for use; it means ready to come to appearance, ready to come forth as a chalice, and only then be ready to be used. In other words, the four causes have prepared the chalice for its own coming-forth, they have prepared the ground for the chalice; they are the chalice’s *ὑποκείμενον* (*hypokeimenon*, “substratum”). What the four causes accomplish is what lies underneath the chalice, its ground. But the causes do not effect the chalice, do not bring it about, do not compel it to come forth on its ground. The causes cannot go so far.

That is why Heidegger, in the previous paragraph, explicitly rejects the notion of the causes as effecting. His term *Verschulden*, he says, is not to be construed in terms of effecting, as the published translation rightly puts it. The question remains, however, as to whether, by translating *Verschulden* as “being responsible,” the translator did construe it in the wrong way.

To return now to the passage under consideration, its meaning is as follows: “According to our example, the silver chalice is obliged to the four causes for making ready the ground upon which it might come forth as a sacrificial vessel” (FT, 12). Compare that to the published translation, already cited, which speaks of the four causes as “responsible for the silver chalice’s lying ready before us as a sacrificial vessel.” This latter is a possibly correct translation, as far as grammar is concerned, and a casual reader of the original German might well take the passage in that sense. But a Heideggerian text, just like an Aristotelian one, does not yield up its treasures to a casual reading. Indeed, in terms of philosophical sense, the published version entirely misses the point. It fails to capture the essential nuance, for, as the contrast with our own version makes clear, it expresses a notion of causality as effecting, precisely that which Heidegger warned against.

The essential nuance, to put it as simply as possible, is that causality is nurturing, not effecting. That is what Heidegger expresses by saying the chalice is obliged to the four causes for its *hypokeisthai*, for that which “lies underneath,” for that upon which it might come forth. The four causes are not responsible for the thing made in the sense of bringing about the existence of the thing, compelling it into existence, delivering it up ready-made. The four causes offer nurture; they lie underneath the thing in the sense of making ready the ground, preparing the conditions, for the potentiality in the matter to actualize itself. That is how, according to Heidegger, the ancients conceived of causality: not as imposition, but as nurture.

Thus the term *hypokeisthai*, “to lie beneath,” confirms the choice of the word “obligation” (instead of “being responsible”) to render *Verschulden*. The four causes place the proper ground underneath the thing, they provide the support or nourishment the thing needs to come forth. The thing is, then, in the precise sense, much obliged to the four causes; but it does not owe everything to them, they are not by themselves responsible for the thing. Consequently, “to oblige” and “to lie beneath,” the first two terms Heidegger employs to characterize ancient causality, bear out the view that he interprets it in the sense of abetting or nurture. As we proceed through the list, we will find the same interpretation expressed again and again, and the cumulative effect ought to be convincing.

Letting, active letting, letting all the way to the end

The next step Heidegger takes in characterizing the causality of the four causes occurs immediately following the proposal of the notion of *hypokeisthai*. In fact, it is to clarify this notion that Heidegger launches a new discussion, introducing a new central term. As *hypokeisthai*, as “lying under,” the four causes prepare the ground upon which the thing might come forth. This accomplishment of the four causes is now described in a disarmingly simple way: the four causes “let the thing come forth” (FT, 12/9). That is the published translation, and it is unexceptionable. It remains to be seen, however, whether the translation will remain faithful to the spirit of this simple assertion.

The most important word in the statement, the new central term on which the discussion will turn, is the word “let.” That most precisely describes the accomplishment of the four causes: not to effect or compel but to let. Of course, this “letting” must be understood in the proper sense, i.e., in the active sense, which we have called rousing, nurturing, abetting. It must still be understood as a type of letting or allowing, though not as a passive *laissez-faire*. To ensure that the letting be understood in the proper way, Heidegger introduces three derivative terms intended to specify the sense of letting. The word for “let” in German is *lassen*, and the new terms are compounds formed by adding prefixes to it: *los-lassen*, *an-lassen*, and *ver-an-lassen*. Heidegger writes them just that way, with hyphens to call attention to the root word, *lassen*, i.e., to show that they are derived from *lassen*, that they are forms of letting.

What do the terms mean? That can be determined by examining the respective prefixes; *los* means “loose,” *an* means “on” or “to,” and *ver-an* means “all the way to” or “all the way to the end.” Thus the prefixes set the words in order from a more passive to an emphatically active sense of letting. The order is this: from letting loose, to guiding onto the proper path to some end, to being in attendance all the way to that end. As applied to the four causes, the sense of the terms is as follows. *Los-lassen*: the four causes let something loose or release it. *An-lassen*: they then let it go on to its path of development. *Ver-an-lassen*: their letting escorts the thing all the way to the end of its development.

It could not be clearer that these terms describe very precisely the process of nurturing. First the daughter (or son) must be given her freedom, then she must be urged onto the right path, and then she must have a shoulder to lean on throughout her journey to adulthood. Or, first the seed must be released, then it must be nourished, and then it must be tended all the way to its end. As Heidegger’s terms suggest (in view of the common root, *lassen*), each step is indeed a matter of letting; to nurture is not to compel. But as the prefixes also indicate, this is an active letting; to

nurture is to let with full diligence. And so we see that here again Heidegger is characterizing the causality of the four causes, the sense in which they make ready the ground for the thing, and let it come forth, as the active letting connoted by the terms “abetting” or “nurturing.”

Heidegger proceeds to summarize his view by stating very succinctly that the *An-lassen* which makes something obliged (to the four causes) is a *Ver-an-lassen*. It would perhaps be quite difficult to translate this statement elegantly and briefly, but the meaning that would need to be brought out is this: something is obliged to the four causes not merely for letting it enter onto the path by which it will fully come forth but for caring for it all the way to the end of its full coming forth. Thus the sentence confirms our view that Heidegger’s interpretation of ancient causality is abetting or nurture, i.e., letting in the active sense, letting all the way to the end.

The published English translation, on page 9, renders the sentence in question as follows: “It is in the sense of such a starting something on its way into arrival that being responsible is an occasioning or an inducing to go forward.” The crucial idea of “letting” has here been almost entirely covered over. *An-lassen* has become “starting,” and *Ver-an-lassen* “occasioning or inducing.” Thus, instead of “letting, active letting, and letting all the way to the end,” the published translation of this central series of terms is “letting, starting, and occasioning or inducing.” Surely this translation does not remain faithful to the idea of letting but, instead, proceeds in the direction of effecting, which is exactly what must be avoided.

The proper translation of *Ver-an-lassen* becomes even more critical in the next lines of Heidegger’s text, for there he explicitly proposes the term as the name of the essence of causality in the Greek sense. It would indeed be difficult to find a simple English word to use as a translation, since our language does not seem to possess a compound of the verb “let” that would add the nuance of activity, “letting with full diligence,” “letting all the way to the end.” The word “nurturing” captures the sense but is too free. I cannot do better than propose “active letting” (perhaps “abetting”) as the least inadequate rendering in the present context. Heidegger’s full statement then comes down (slightly paraphrasing) to this: “Considering what the Greeks experienced when they spoke of something as being caused, namely its being ‘much obliged,’ we now give the term *Ver-an-lassen* [‘active letting’] a further sense, beyond the usual meaning of the common term *Veranlassen* [‘occasioning’], and it then names the very essence of causality as thought in the Greek manner” (FT, 12/10).

Thus Heidegger explicitly distinguishes his term *Ver-an-lassen* from an ordinary German word, *Veranlassen* (the same spelling, without the

hyphens). The latter is indeed well translated by “occasioning,” and it names the typical modern notion of causality. Consequently, the published translation, which renders both terms, Heidegger’s highly nuanced one and the ordinary one, by the same word, “occasioning,” must be misleading, since it makes no distinction here where a distinction is explicit and crucial. The published translation merely says that the one occasioning is more inclusive in meaning than the other. Let us examine the distinction as Heidegger expressly draws it, in order to see why the distinction is not one of mere greater inclusiveness; on the contrary, the term “occasioning” is appropriate only in the one case and not at all in the other.

Heidegger characterizes the ordinary word, without the hyphens, as follows: “In its ordinary sense, the term *Veranlassen* means nothing more than collision and setting off” (FT, 12/10). Therefore his special word is not to be understood in terms of collision and setting off. Heidegger is surely alluding here to the favorite example of causality in modern thought, namely the colliding of one billiard ball into another and the subsequent “setting off” of the motion of the second one. This was the example invoked by those skeptical modern philosophers who maintained that there is not any humanly knowable causal connection between the two events, the collision and the starting of the movement of the second ball. All we know is that on the *occasion* of event A (the collision of one ball into another), event B (the motion of the second ball) regularly follows. There is no communication of the motion of the one ball to the other, the one ball does not *give* motion to the other, and so the second ball’s motion is simply, and inexplicably, *set off*. We cannot have insight into the intrinsic connection, if any, between the two events. All we have is the extrinsic connection of temporal succession: on the *occasion* of the one event, the other is *started* or *set off*. “Occasioning” is thus the appropriate word for this understanding of causality, but it is as foreign to the ancients as can possibly be imagined. Thus it is misleading to translate *Ver-an-lassen*, Heidegger’s proper name for causality in Greek thought, as “occasioning,” and the same applies to the translation of *An-lassen* as “starting.” Both these English words are appropriate only to our own ordinary, modern, understanding of causality.

Nor does it matter whether occasioning is taken in the skeptical sense or not. Heidegger does seem to be invoking the skeptical theory of occasionalism. Yet he realizes that the common (nonphilosophical) understanding of causality today is not skeptical. For the everyday understanding, causality means efficient causality, and examples of efficient causality are obvious. From the everyday standpoint, it is self-evident that collisions *cause* motion, so much so that the skeptical view would be taken as the typical reversal of the clear and the obscure which philoso-

phy is notorious for. (Anyone still innocent of modern philosophy will surely find it difficult even to imagine what the skeptical arguments could be.) Except to some philosophers and theoretical scientists, the collision is seen today not merely as a temporal predecessor but as *responsible* for the motion of the second ball, as *imposing* that motion.

While the commonsense view might be slightly closer to the ancient understanding, Heidegger's point is that it actually has much more in common with the skeptical outlook than with Greek thinking. In fact, the skeptical view and today's commonsense understanding are identical in essentials. For both, the paradigm case of causality is still, as Heidegger says, collision. For both, what counts as causality is efficient causality. The only difference is that the skeptical view denies to human beings the possibility of ever coming to know the causal connections among things, while for common sense the causal connection is, at least sometimes, obvious to us. Yet what is meant by "causal connection" is the same for both; it means collision: that is, violence, force, overpowering, the imposing of motion from one thing to another, or, in short, efficient causality. For skepticism, only God could have insight into the working of this causality, only God could see the motion being imposed by one billiard ball onto the other, but for both views the meaning of causality is the same: imposition.

It is that sense of imposition that rules out the term *occasioning* as a translation of *Ver-an-lassen*, the term Heidegger proposes as the proper name for the essence of causality as thought in the Greek manner. What is distinctive about the Greek understanding is that there causality does not mean violence, forcing, effecting. It means, basically, *Lassen*, letting. This letting is to be understood in as active a sense as possible; yet it does not ever mean to impose instead of abet. Thus Heidegger's term *Ver-an-lassen* is not "more inclusive" than the ordinary word *Veranlassen*; on the contrary, these terms are incompatible, and only the former could apply to the ancient sense of causality.

Producing, bringing-forth, nature

We have now worked through the first half of the long series of terms by which Heidegger characterizes the causality of the four causes. Causing is "obliging," "making ready the ground," "letting," "active letting," and "letting all the way to the end." All these terms point in the same direction, toward an interpretation of the causality of the four causes as nurturing rather than imposing. The next two terms in the series, however, at first appear to revoke that interpretation, for they assert that the causality of the four causes is a matter of "producing."

Heidegger introduces the new terms by asking about the unity of the four causes, the unity of the four modes of active letting. He begins his account of the unity by placing the letting in a new light: the four causes let what is not yet present come into presence. The idea, in more traditional terms, is that the four causes let what does not yet exist come into existence. Here we encounter a kind of contradiction, for is it possible to *let* something that does not exist come into existence? Is it possible to nurture something so that it comes to be? At first view, that is not possible: only what already exists can be nurtured, and so nothing can be nurtured from nonbeing to being. One thing can be nurtured to give birth to another, such as seeds can be nurtured to bear crops, but nothing can be nurtured to give birth to itself. A thing can be nurtured so as to develop to a more perfect stage, but then it must already exist in some less perfect way. In other words, letting presupposes something already there to be let; and so existence is *presupposed* by letting and cannot follow from it. Thus if “letting” means to let into being, then the letting must be reinterpreted away from nurturing and toward producing. That is precisely the course Heidegger seems to pursue when he says, “Accordingly, the four causes are ruled over, through and through, and in an integral way, by a bringing, one which brings about the presence of something” (FT, 12/10). The last phrase, if taken in its more colloquial sense, could also be translated as follows: “one which produces the existence of something.” Thus Heidegger is here interpreting the “letting” of the four causes as a bringing, a bringing about, a producing. Indeed, Heidegger says explicitly that this bringing is the dominant character; it holds sway over the four causes and integrates them into a single causal nexus. The character of “bringing something about” thus has an ascendancy over the “letting” and determines it. The letting is to be understood as a bringing about or a producing, rather than vice versa.

The sense of the bringing as a producing is reinforced by Heidegger’s appeal to Plato in this context. Heidegger cites a passage from the *Symposium* in which Plato gives the name *ποίησις* (*poiesis*) to any causal action by which something comes into being from nonbeing. That is to say, the bringing now at issue, the dominant character of the causality of the four causes, is *poiesis*. And *poiesis* precisely means making or producing; *poiesis* is the bringing into being of what was previously not in being. Heidegger’s own rendering of the word *poiesis* here is *Her-vor-bringen*. Translated quite literally, Heidegger’s term simply means “bringing-forth.” Yet, in the context, it is clear that what is meant here is “bringing forth *into being*,” causing to pass from nonbeing to being, or, in other words, “making,” “producing.” In fact, Heidegger’s term *Her-vor-bringen*, “bringing-forth,” in its more colloquial sense, does mean simply “producing.” And, in another place, Heidegger himself

asserts this sense to be the predominant one: “Bringing-forth today means the making and fabricating of an individual object” (GP, 85/76).

The two new terms that characterize the causality of the four causes, “bringing” (or, more specifically, “bringing forth”) and *poiesis*, thus seem to go back on what was said about the four causes as modes of nurturing. Instead of assisting something to give birth or to develop, it now seems that the four causes produce the existence of something out of its previous nonexistence. The four causes bring it about that what they cause exists in the first place, and they do not merely nurture something along by gearing into it, by going with the thing’s own flow. The four causes apparently cause the existence of the thing and first produce its “flow.” Thus the causality of the four causes cannot be a matter of “gearing into,” since there is nothing to gear into until the four causes have brought it forth. It seems that the thing “owes everything” to the four causes, is produced by them, and is not merely abetted or encouraged. In other words, Heidegger’s current discussion implies an understanding of causality as imposing, as bringing about or effecting the existence of the caused thing.

On account of this impression, i.e., the implication that the causality of the four causes is a producing, a bringing about, an imposing, Heidegger immediately goes on to say that “everything depends” on our thinking of *poiesis* in its full breadth and in the Greek sense. Everything depends on this, for otherwise we would indeed be misled into thinking of ancient causality as effecting and imposing. What then is the proper sense of *poiesis*? According to Heidegger, it does not merely refer to handcraft manufacture or to the artistic and poetic production of appearances and images. On the contrary, nature, too, is *poiesis*; in fact, nature is even the paradigm case of *poiesis*: “Φύσις [*physis*, ‘nature’], too, self-emergence, is a bringing-forth, *poiesis*. *Physis* is even *poiesis* in the highest sense” (FT, 12/10).

How can nature be *poiesis* in the highest sense, the paradigm of bringing-forth or production? It can be the paradigm only if production does in fact primarily mean nurture. Production is then not equivalent to effecting, and so the terms “bringing-forth” and *poiesis* do not retract the notion of causality as nurturing or rousing. Let us try to make that clear.

We begin with the way Heidegger distinguishes nature from manufacture: “For what comes to be φύσει [*physei*, ‘naturally’] has the source of the bringing-forth, e.g., the source of the blooming of the blossom, in itself” (FT, 12/10). On the other hand, what is brought forth by craft has the source of the bringing forth not in itself but in another, in the artisan.

Heidegger’s term I have rendered in a preliminary and neutral way as “source” is *der Aufbruch*. This German term is an excellent candidate to translate κινῆσαν, Aristotle’s word for the cause that is the source of

the motion, the cause that sets the motion going, the cause that was later named—and understood as—the efficient cause. Heidegger's term has a wide range of meanings, but two basic senses are relevant here: "setting out on one's way" and "blossoming out." It refers then to a kind of setting out that is precisely a blossoming out. The term thus names not only the source—the setting out—but also the way that is set out upon, namely the process of blossoming or, more generally, growth. Thus the term specifies what sort of cause this source is and how it stands at the head of the motion.

In the first place, if the motion is a blossoming, then the source is certainly not an efficient cause, since blossoming cannot be imposed upon anything by an outside agent, cannot be forced upon a passive matter by an efficient cause. Nothing can *make* a bud blossom if it does not have it in itself to blossom. A bud can only blossom out naturally, which is to say that the source of the blossoming must lie within the bud; the blossoming has to be a *self*-emergence. The cause that is the source of a natural motion is then nature itself, the natural tendency of the bud to blossom out, its own directedness to a certain end, its own pregnancy, its own "flow" in a certain direction. What sort of cause is this? A directedness or a tendency is not an imposition; this cause has rather to be understood in the context of nurture. That is to say, this source is a participant in a process of nurture.

To make that explicit, let us look more closely at what does the nurturing in a natural process and what gets nurtured. Let us think of a bud as pregnant with a blossom, as naturally directed to that end. The potential of the bud is not an efficient cause; on the contrary, the potential is a *deficient* cause. That is, it requires certain conditions in order to come to fruition. The bud will not blossom by itself. Nor can it be forced; it must be *allowed* to grow, it must be "actively let." To let a bud grow is to provide it with the required nourishment, the favorable conditions; it is then up to the bud to take advantage of these conditions. Now, these conditions and nutrients are also nature; they are, let us say, material nature, such as earth, light, water, and warmth. These conditions are precisely nutrients, i.e., nurturers, and not imposers; they cannot force growth. Natural conditions cannot make an artificial bud grow. The conditions merely gear into the thing's own flow, into its own nature, its inborn propensity toward motion in a certain direction. Conversely, to grow, to be nurtured, is to take up these conditions in an active way; to grow is to allow the conditions of growth to be effective as nutrients. Accordingly, the process of growth and the process of nurturing are mutually founding and are intertwined: they each let the other be.

Thus the source of a blossoming movement is nature, and the conditions that let the movement occur are also nature. In the process of

growing or blossoming there is an interplay between the source and the conditions, a cooperation or joining together of the forces of nature. If we call the source the cause that was later understood as the efficient cause, then the conditions, taken in a broad sense to include not only material nature but the natural end as well, coincide with the other three causes. Thus all four causes are nature, and all four causes cooperate in producing the blossom. In other words, in bringing forth the blossom, in letting it come forth, the four causes are unified. They are unified as nature, as aspects of the one nature, and unified as cooperating forces, as joining together in a common project. In bringing forth a blossom, the four causes form a single causal nexus, and the forces of nature are unified. That is to say, as *poiesis*, as bringing something forth, *physis* manifests the unity of the four causes. The four causes play together, i.e., get unified, in a special way when it is a case of something coming forth naturally.

Thus the question of the unity of the four causes, the question with which Heidegger had initiated the present discussion, leads to *physis* as *poiesis*. The four causes are most one, their forces are most joined together into a single combined force, their forces are most concentrated, in the case of something produced naturally in the manner indicated: i.e., when the production is growth, when the source of the movement is natural (internal to the thing moved) and the external conditions that nurture it are also natural. Presumably, it is this concentration of forces that makes natural *poiesis* “*poiesis* in the highest sense,” as Heidegger claims. Indeed Heidegger does say that *physis* is the highest form of *poiesis* “since” what comes forth by nature has the source of the coming-forth in itself. But Heidegger leaves us on our own to draw out this “since.” *How* does that make *physis poiesis* in the highest sense? In other words, what sort of productive forces are being marshalled together here? In what sense is nature the most forceful form of production?

Nature is certainly not the most forceful, if force is taken in the usual sense, i.e., as imposition. A laser beam can impose the form of a flower, by, let us say, etching it into a piece of glass, more forcefully than nature can bring forth a blossom from a bud. The darling buds of May are liable to be shaken, which is to say that they are tender and, in Shakespeare’s sonnet, easily “untrimmed,” denuded. Nature is not a concentration of the forces of imposition; what is brought forth by nature is not imposed at all. On the contrary, nature’s way of bringing forth is to nurture. The causal nexus in the case of nature is a nurturing nexus. Nature is a concentration of nurturing forces. So then we see how *physis* can be *poiesis* in the highest sense, how nature can be the highest form of production: only if production means nurture.

That is of course precisely what we have been trying to show: for Heidegger ancient causality is nurture, and the paradigm of production

is growth, not imposition. Heidegger employed two further terms to characterize the causality of the four causes, the terms “bringing-forth” (or “production”) and *poiesis* (“making” or “production”), and these seemed to imply a notion of imposition. But, according to Heidegger, “everything depends” on thinking of *poiesis* in its full breadth and in the Greek sense. We see now that that sense is *physis*, and this term in the list of characterizations restores the notion of nurture. If bringing-forth and *poiesis* are thought as *physis*, as nature, then production does indeed mean nurture. To bring forth does therefore not mean to bring into being, to impose existence; it means to produce the way nature produces, namely by helping along, by gearing into an already existing tendency in a certain direction. To bring forth thus means to abet, not to create *ex nihilo*. That is the conclusion we reach if we think of *poiesis* in its full breadth and in the Greek sense. That is to say, all of the terms—without exception—in Heidegger’s list of characterizations of ancient causality do point in the same direction, the direction of nurture rather than imposition.

Manufacture and contemplation

We now need to see how this paradigm of nurture applies to production in the usual sense, i.e., to manufacture, to artificial as well as to natural production. Thereby we will begin to join the ancient theory of causality (= the essence of ancient technology) to the practice of ancient technology.

The essential difference between natural production and manufacture by craft amounts to the fact that, in the former, the source (the setting in motion) resides within what is to be produced, and in the latter case the source resides in another, in the artisan. What this signifies is that handcraft does not display the unity of the four causes as plainly as nature does. The causal nexus, in handcraft, does not entirely exemplify a marshaling of causal forces. In handcraft, therefore, the essential character of causality as nurture is less easily visible. Yet, for Heidegger, the same paradigm applies, and handcraft is not to be understood in terms of a new type of causality. The same type of causality holds sway in handcraft, but in a more hidden way.

Heidegger proceeds by offering three instances of handcraft production—i.e., three instances of ancient technology in practice—and shows how the paradigm of nurture applies. The three examples are the farmer, the waterwheel, and the artisan, such as the house builder or the silversmith. The first two can be disposed of rather easily, and we will concentrate on the third.

It is clear that the farmer is a nurturer. Heidegger's account of the traditional farmer implies nurture at every turn: "The field the farmer of old used to cultivate appeared differently, i.e., when to cultivate still meant to tend and to nurture. . . . In sowing the grain, the farmer consigns the seed to the forces of growth, and then he tends to its increase" (FT, 15–16/14–15). The notion of consigning to a higher force is at the heart of the attitude of the traditional farmer. It marks this farmer as a midwife, one who respects an already given pregnancy and who understands himself as being in service to it, submitting to it, gearing into it, rather than imposing on it.

The same attitude of respect is evident in the making of a waterwheel as compared to a hydroelectric dam. The waterwheel in an obvious sense gears into the natural forces of the river rather than imposing on them by direct opposition. Heidegger expresses it this way: the waterwheel is built (*baut*) into the river, but the river itself is mis-built (*verbaut*) into the hydroelectric plant. The word *verbaut* commonly means "blocked" or "obstructed," but it also connotes a wrongful building or a building that misuses or exhausts the building materials. The word is rendered in the published translation as "dammed up." That translation indeed captures part of Heidegger's sense, but it misses the central point, namely that the river is *used up* to make the power plant. The river is itself built into—i.e., made into—a power plant: the river is transformed into something else, into the power plant, and the river now takes its essence from the power plant. Thus the difference is clear: the waterwheel is built into the river, it gears into the flow, and the river remains what it was. But the power plant imposes on the river to such an extent that now the river itself is made into something else; it has been exhausted in favor of the hydroelectric plant. The river has been commandeered by the power plant and is now in essence nothing but a supplier of hydraulic pressure to the plant. The distinction between the respectful attitude of nurture and the hubristic attitude of imposition could not be more striking.

For Heidegger, the hydroelectric plant exhausts the river; i.e., a new essence is forced on the river, and the river is no longer a natural thing. Yet, as Heidegger himself admits, the river can surely still be enjoyed as a part of nature. Even if the Rhine is dammed up, it remains a beautiful river. Nevertheless, for Heidegger, the modern attitude of imposition extends all the way to the natural beauty of the river. For, now, as Heidegger notes in a rare expression of mockery, the natural beauty of the Rhine has been commandeered by tourism, and the beautiful Rhine actually exists "in no other way than as an object on call for inspection by a tour group ordered there by the vacation industry" (FT, 17/16).

Let us now turn to the third example of ancient technological practice, the activity of the maker in the usual sense, the artisan, such as the

silversmith. Even she does not make or produce as ordinarily understood; that is, her work is not that of imposing form onto matter. According to Heidegger, the essential work of the silversmith is contemplation! What does the smith contemplate, and how is her contemplation related to the bringing forth of the chalice or piece of jewelry?

Heidegger's statement regarding the contemplation of the artisan is as follows: the silversmith contemplates, and from her contemplation the other three causes are gathered into unity. The published English translation (page 8) says: "The silversmith considers carefully and gathers together the three aforementioned ways of being responsible and indebted." This makes it seem that the silversmith is presented with certain preexisting objects, and her task is to take them up into a careful consideration and then unify them. But that misses the point. On the contrary, for Heidegger the contemplation of the silversmith brings forth its own object, in the precise sense that this object would not exist without the contemplation. On the other hand, the contemplation does not *create* the object, either. The contemplation uncovers something that would remain hidden were it not for the silversmith. The contemplation of the silversmith is, as it were, semicreative. That is what we need to understand.

Heidegger provides two clues indicating how we should grasp the contemplation of the silversmith. Heidegger says that contemplation is based on *ἀποφαίνεσθαι* (*apophainesthai*, "letting be seen"), and that for the Greeks to contemplate (*sich überlegen*) means *λέγειν*, *λόγος* (*legein*, "to gather together"; *logos*, "discourse"). We could say, then, that, for Heidegger, what the silversmith contemplates is what discourse allows to be seen, what is gathered together in the word. But what is gathered together in words? Words gather together in virtue of the fact that they are universals; in the word "chalice" all actual and possible chalices are included. The word touches what unites all the particular instances, what gathers them together, what they all have in common. That is to say, the word names that which makes any chalice one with all other chalices, that which makes the chalice be what it is as a chalice. That which makes something be what it is is called the essence. So, in gathering together, the word expresses the essence.

That is precisely what, according to Heidegger, the contemplation of the artisan aims at, what the artisan sees in contemplation, namely, the essence. In contemplation, the essence of the chalice is revealed to the silversmith. The fundamental task of the silversmith is to uncover the essence of the chalice before that essence actually exists in the silver. The smith does not create this essence, nor does the essence simply lie there as a preexisting object for her careful consideration. The essence is at first hidden; it is latent in the silver, and the primary task of the silversmith is to uncover, in contemplation, the potential chalice buried in the material.

The primary task of the craftsman is therefore to see in advance. That is to say, the craftsman is one for whom something is visible (*apophainesthai*) in a privileged way, and what appears to her is precisely what will be named in discourse (*logos*): namely, the essence. Differently expressed, in seeing the potential chalice in the silver, the smith sees what the silver is pregnant with. The smith does not impose this latent essence on the silver; it is indeed something already there in an inchoate way. The smith must contemplate until the potential chalice is revealed to her. On the other hand, neither is this disclosure of the essence imposed onto the smith; it is revealed to her, but not without her cooperation. She must be open to receive this disclosure, and this openness requires the practiced eye, the creative hands, and, in general, the genius that precisely marks the skilled artisan as such. Thus the smith is semicreative: the buried chalice does not uncover itself to just anyone (and so the smith must be skilled and creative), nor does the smith impose the form of the chalice without regard to the matter (and so the smith must be passive and accept the self-revelation of the already latent essence). In short, the smith must *actively let* the essence be revealed to her in advance. That is how she is semicreative: the appearing of the chalice in advance is a joint product of the silversmith's uncovering efforts and the thing's own self-revelation.

Thus the artisan's primary task, that which makes her be an artisan, is more a matter of theory than practice; it is a matter of insight, disclosive looking, rather than practical skill. The artisan's task is to disclose the essence, to see, in contemplation, the latent chalice interred in the matter. This marks the genuine *poiesis*, the proper bringing forth: *what the artisan brings forth is primarily not that which is visible to all but that which is visible only to her*, the essence she sees with her mind's eye. She does not create this essence, yet she is not uncreative, either. The artisan is semicreative: through her the essence comes to birth; without her, the essence would never be disinterred. In other words, the artisan abets the essence into revealing itself, the artisan nurtures the essence forth. The *poiesis* of the artisan is, accordingly, for the Greeks, nurture rather than production in the usual sense.

Yet what about the bringing forth of the actual chalice, the bringing of the essence into concrete existence, the fashioning of the chalice that all can see? Is that not more of a making than is the mere contemplation of the essence? And is that not a matter of production rather than nurture? For the Greeks, according to Heidegger, the answer to both these two latter questions is no. The fashioning of the chalice is indeed a matter of nurture, and this fashioning is actually less of a *poiesis* than the bringing forth of the essence in contemplation.

The Greek understanding of the bringing forth of the visible chalice would be expressed perfectly, for Heidegger, in the already cited testimony

of Michelangelo to the effect that the sculptor merely chisels away the extraneous bits of marble so as to release the latent statue within. The artisan does not impose form onto a passive matter but instead sees what the matter is already pregnant with and nurtures that into actual existence. The artisan is a nurturer both as regards the essence visible in contemplation and as regards the artifact wherein the essence will be visible to all. The artisan is constantly in service to the essence and abets it to become more and more visible; the artisan submits herself to the essence and sees herself as the servitor of the essence, its handmaiden or midwife or way-paver. This is how Heidegger express it, directly in terms of the Greek understanding of *techne*, which here refers to the human, versus the natural, way of *poiesis*:

For that is what *techne* means: to grasp beings . . . in their outward look, *eidōs*, *idea*, and, in accord with this, to care for beings themselves and to let them grow, i.e., to order oneself within beings as a whole through productions and institutions. *Techne* is a mode of proceeding *against physis*, though not yet so as to overpower it or exploit it, and above all not to turn use and calculation into principles, but, on the contrary, to retain the holding sway of *physis* in unconcealedness. (*GP*, 179–180/155)

This says that *techne* is primarily a matter of insight or understanding: it is a grasping of beings or, more properly, a perceiving, in advance, of their outward look, their *eidōs*, their essence. Then, in accord with this perceived essence, *techne* involves “caring for beings and letting them grow.” In other words, it involves letting beings come into their essence, letting their essence come forth in them, letting the essence come to actual existence in beings. The bringing forth of the actual things is thus a matter of care, of letting or abetting the essence. That is why Heidegger said that, on the Greek understanding, *techne* is a matter of ordering *oneself*. *Techne* does not amount to ordering things, making them submit to human will; on the contrary, it is a submitting of oneself to the essence of things, putting oneself in service to that essence. *Techne* in a certain sense is against nature. It is indeed an interfering in nature, but precisely in order “to retain the holding sway of nature in unconcealedness.” This is, no doubt, a difficult phrase, but it surely means that *techne* interferes in nature precisely for the purpose of allowing what is unconcealed in things to come into its own, to hold sway as visible for all. Ancient technology is therefore not an overpowering, an imposition of an arbitrary essence, but instead amounts to allowing what is self-emergent to be self-emergent more fully, to become visible, unconcealed, for everyone. The “interference” of ancient technology in nature is a “gearing into” nature; it is not an imposition upon nature but only an abetting or fostering of nature.

The ancients, then, understand human craftsmanship—i.e., technological practice—as a process of nurture. The artisan does not impose her will onto matter but instead abets what reveals itself to her, abets it to be revealed to everyone. It is a matter of nurture, since the artisan stands in service to a pregnancy, to something incipiently self-emergent, which she respects and abets. The artisan, on this understanding, does not impose her will onto a passive matter; on the contrary, the artisan is the one “imposed on”: her activity is a response to an appeal. The appeal is made upon her by the hidden essence, an appeal to abet its coming forth into visibility. That decisively marks technological practice, in the ancient understanding, as nurture.

The second question we raised above (Which is more of a bringing-forth: the contemplation of the essence or the actual fashioning of the product?) can be formulated in terms of the distinction between *technē* and *empeiria* (ἐμπειρία). The one who sees the essence in advance is not always the one who brings the essence into concrete existence. For example, the architect has *technē*, he knows what is to be done, but he might not be skilled in the actual doing, in the actual building of the house. The laborer, however, is skilled in construction, although she needs the blueprint provided by the architect. The architect has the *logos*, the *eidos*, the essence; whereas the laborer has experience (*empeiria*), i.e., the practical skill to produce the actual house. Another example would be the physiologist (in our sense) versus the medical practitioner. The former has knowledge of the proper function of the body, while the latter may lack theoretical knowledge but does have the practical skill to be of service in restoring that function when it is disrupted. The question is: which of these has the priority? Which is more properly called the maker of the house: the architect or the construction worker? Which is more properly the begetter of health, the one who knows health in essence or the one who has practical experience in restoring health in particular cases? According to Heidegger, the former has the priority in the Greek way of thinking and is more highly honored. Even though the one who possesses *technē* may fail in practice, she is the genuine maker, since she is autonomous, and the persons with practical skill rely on her for their end. The one who grasps the essence is therefore more genuinely the source of the motion or change; she more genuinely brings forth the motion.

More precisely, for Aristotle, it is the essence itself that is the source of the motion. This is how he expresses it in his *Metaphysics* (1032b21), according to Heidegger’s translation: “The genuine producer [in the case of something brought forth by *technē*], and that which initiates the movement, is the *eidos* in the soul” (PS, 43/30). The *eidos* is the producer, because it rules the entire process of production: everything else (the work of the architect and that of the construction tradesman) is in service to its

becoming visible. Accordingly, the one whose soul is the place of this *eidōs* is more of a producer—since she is closer to the *eidōs*—than the one who has practical skill but relies on the other for the *eidōs*. The one who sees the *eidōs* in advance is the genuine producer, and so the architect is more of a producer of the house, more of a cause of the house, than the mason. In other words, it is *technē* that, in the more proper sense, produces the house, not *empeiria*.

In fact, for Aristotle, this distinction between the one who sees the *eidōs* in advance and the one who manually fashions the artifact amounts to the difference between the master and the slave: “For, the one who has the power—of mind—to see in advance is by nature the ruler and by nature the master, whereas the one who has the power—of body—to fashion those same things is subject to the ruler and is by nature a slave” (*Politics*, 1252a32).

For Aristotle and the Greeks, a master has to be considered more of a cause than a slave, and so *technē*, seeing the *eidōs* in advance, the work of the soul, theory, is more of a cause than is manual labor. Thus, on the Greek understanding, the genuine *poiesis* or production is the bringing forth of the *eidōs*; the fashioning of the concrete artifact is a *derived* form of making, just as it is a derived form of nurture. The paradigm case of *poiesis* is not an affair of practice, of manual labor, but is a work of the soul, a work of theory, namely the artisan’s contemplation or seeing in advance or disclosure of the essence still buried in the matter and invisible to ordinary eyes. The artisan brings forth this essence first of all in her soul, and that bringing-forth, the paradigm of bringing-forth, is understood by the Greeks as a kind of midwifery or nurture. The artisan who has already contemplated, or some other person—some slave—with the required skill, will subsequently—with his body—bring forth this essence in matter; and that too is understood by the Greeks as a kind of midwifery, abetting the essence to achieve full visibility. The bringing-forth in matter is less highly honored than the bringing-forth in the soul; the former is less of an accomplishment, less of a causing, less of a bringing something about, less of a *poiesis*. If it is also less manifestly an instance of nurture, that fact changes nothing regarding the paradigm. The paradigm that rules throughout the entire process of *poiesis* is nurture: actively letting some essence come into full visibility. Its first, and more important, visibility is in the soul of the one who is able to bring it forth there in advance. Its second, common visibility is its subsequent visibility to all eyes. Throughout the process, as Aristotle says, the *eidōs*, the essence, is, in the strict sense, the genuine producer, since the contemplating artisan as well as the manual laborer merely serve it and are both, in a manner of speaking, slaves to it. Yet the artisan is less of a slave than is the manual laborer, since the artisan is closer to the *eidōs*. And so, the

artisan, the one who possesses *techne*, is more of a producer than is the laborer who puts his hand to the actual fashioning of the thing. The contemplative artisan's mode of causality, her mode of production or bringing forth, namely nurture, is the paradigm of production and the paradigm of technological practice, as understood by the ancients.

Bringing-forth as disconcealment

What then, ultimately, is ancient technology? Heidegger answers by offering two final characterizations of bringing-forth or producing, as the Greeks understood it. Heidegger's concluding question, and his preparatory response to it, are as follows:

But how does bringing-forth or producing happen, whether that be in nature or in handcraft and art? What actually is this bringing-forth or producing in which the four modes of active letting play out? The active letting concerns the presence of that which in each case is brought to show itself in the bringing-forth. The bringing-forth brings something forth out of concealment into unconcealment. Bringing-forth occurs only insofar as something concealed comes into unconcealment. (FT, 13/11)

The sense of producing or bringing-forth invoked here by Heidegger, namely, the bringing of something out of concealment, bringing it to show itself in unconcealment, is exactly the one we mean when we speak of producing witnesses in court. To produce witnesses does not mean to create them, to fabricate them for the occasion, to bring them into being out of nonbeing. It means, rather, merely to lead them forth, which is indeed the etymological sense of "pro-duce," namely: "draw forth," "lead forth." It means to bring the witnesses (who already exist) out of an invisibility into visibility. It means to bring them out of concealment into presence, into view. To produce witnesses is, then, to put it colloquially, to dig them up. It does not mean to *make* them but merely to find them out, discover them, uncover them, take the wraps off them.

This notion of producing as leading forth into visibility for all to see (rather than making *ex nihilo*) perfectly summarizes Heidegger's view of ancient causality and ancient technology as he has presented it all along. To bring into visibility is nothing else than to abet, to encourage, to nurture. To produce means to take by the hand and lead along a path that ends with full visibility. It means to let things show themselves—in the active sense of letting, i.e., precisely, digging them up. To let witnesses show themselves does not mean merely to do nothing to prevent their becoming visible. On the contrary, it means to lend an active hand, without

which they would remain concealed. To produce witnesses, to dig them up, is, therefore, semicreative. The effort at digging is essential for the witnesses to show themselves, but it is not pure creation, *ex nihilo*, and instead only gears into an already existent potentiality of the witnesses to show themselves, namely, their preexistence in a state of hiddenness.

It is this sense of abetting that has been in play all along, in the entire list of terms Heidegger has offered to expose the sense of ancient causality and ancient technology: obliging, making ready the ground, letting, active letting, letting all the way to the end, bringing-forth, producing (as I would now translate *poiesis*), and nurturing (to express the processes of nature and thereby translate *physis*). The new term that Heidegger now introduces, one of a pair that expresses the ultimate sense of ancient causality and ancient technology, should then come as no surprise, especially in view of our discussion of the production of witnesses in court. Heidegger's penultimate term that means to cause or produce in the ancient sense is this: to dig up.

The German term is *Entbergen*; a less colloquial translation would be "to disinter" or "to unearthen." The published translation renders it as "to reveal." The word *Entbergen* is coined by Heidegger, but the German language lends itself to coining in exactly this way, namely by the novel combination of two familiar words or, in this case, a prefix and a verb. Heidegger's word is quite clear on the basis of its linguistic constituents. Still, the sense might have been somewhat ambiguous, except for the fact that Heidegger dispels all the ambiguity by providing the Greek equivalent of *Entbergen*. We will come in a moment to that Greek term, which is the last one on Heidegger's list of characterizations of ancient causality and technology. It is one of the most important terms in all of Heidegger's philosophy, and Heidegger has spilled an untold amount of ink over it. What he has taken so much pain to show, and to interpret, is the fact that, as he sees it, this Greek word is constructed upon an alpha privative. Thus it is an essentially negative word that is meant to be expressed by *Entbergen*. Accordingly, the prefix, the *ent-*, is intended in its privative sense. It then means to "deprive of" or "undo" the *Bergen*. Now *bergen* can mean to salvage or harbor, but that would make no sense in this context. *Bergen* must correspond to the remainder of the Greek term at issue, which it can do very well, if it means what it does in many other German compounds. This is its root sense, which derives from its etymological source, *Berg*, "mountain." This root sense implies being concealed or deeply covered over, as with a whole mountain. The privative prefix then adds the idea of digging something out from under a mountain, unearthing it, disinterring it. The word "revealing," used in the published translation, while not obviously a privative expression, does contain the idea of removing veils, and so "revealing" is very close

to the mark. “Disinterring” and “unearthing” express better the negative sense and also coincide with the basic meaning of Heidegger’s German term. Nevertheless, these two English words, as well as “digging up,” while forceful and concrete, are perhaps actually too concrete to be used in the contexts in which Heidegger will eventually employ *Entbergen*. Let us for the moment be content with the general idea of *Entbergen* as an unveiling or uncovering; we shall be in a more favorable position to settle on a definite translation after we have grasped the meaning of the Greek word that corresponds to it.

This Greek word, which, according to Heidegger, expresses what he calls *Entbergen*, is *ἀλήθεια* (*aletheia*): “Bringing-forth occurs only insofar as something concealed comes into unconcealment. This coming is founded on and transpires within what we are calling *Entbergen*. The Greek word for it is *ἀλήθεια*, which the Romans translate as *veritas*. We say in German *die Wahrheit*, and we ordinarily understand that to refer to the correctness of a representation” (FT, 13/11–12).

In Heidegger’s eyes, something has been lost in the translation of the Greek term *aletheia* by the Latin *veritas* or the German *Wahrheit*. In English, *veritas* and *Wahrheit* both mean “truth,” a word that would also have to count as an impoverished rendering of what the Greeks express in speaking of *aletheia*. For Heidegger, there is the original Greek language, especially in its pre-Socratic state, and then there are all the other more recent Western languages. The transition (or translation) from the Greek to the others happens as a falling away from the greatness of the origin. This transition is a mark of essential history; i.e., the transition is motivated by *the* event in the history of Being and is a sign that, after a more wholehearted self-showing, the essence of beings has been withdrawing its countenance from mankind. Let us attempt to see how all this is so.

On the most superficial level, the occurrence of the event in question is reflected in the difference between the negative sense of the Greek term and the positive modern words. The Greeks express with a negative expression (*a-letheia*: “dis-concealedness,” “un-hiddenness”) what modern Western languages express without any negative connotation (“truth”). This is no mere linguistic accident for Heidegger but in fact has the strongest possible motivation: the one term arises out of an experience of the self-showing of the gods, while the other is motivated by their reticence to show themselves. The negative term accords a priority to Being, while the positive one is oblivious of Being and instead gives precedence to human subjectivity. The negative term corresponds to an age that still felt the presence of Being, an age in which Being still made its presence felt, whereas the positive terms reflect an age that has forgotten Being, an age in which Being offers itself so reticently that human subjectivity could supplant it.

We now think of truth as a human affair: it is the correspondence of our intellect to the things. For us, truth resides in a judgment, and there is no truth without a judgment. Truth exists when some human subject forms a judgment that corresponds to some objective state of affairs. For the Greeks, however, there is something more original about truth than the human powers of forming judgments in correspondence with the things. What the Greeks experience as more original, as the foundation for truth in our sense, is something that does not rely on us but on the things: namely, their coming out of hiddenness and showing themselves at all. The Greeks, according to Heidegger, experience things as stepping forth out of an original concealment. For the Greeks, a disconcealment has come to pass in regard to things, and that is why humans can now form correct judgments. That original disconcealment, however, is not our own doing; on the contrary, it is precisely the condition of the possibility of our doing anything whatsoever. In order for us to do anything, to act upon anything, to stand in any relation to any being, it must have been disclosed to us in advance what a being is in general. Otherwise, action (if it could be called that) would be totally blind, since we would then have no sense of ourselves or of the beings other than us. Consequently, for us to investigate or reveal anything about beings, Being must have already disclosed itself; truth, in the sense of the disconcealment of Being, must have come to pass for there to be a human relation to beings and, thereby, judgmental truth. Our human, judgmental truth therefore lacks autonomy; it depends on the disconcealment of Being.

We can see now, perhaps, something of what Parmenides means by calling truth a goddess. According to Heidegger, the word “goddess” in Greek, *θεά* (*theá*), is intrinsically related to the word for the look, *θέα* (*théa*). A goddess is one who in a special way looks at us. Parmenides is then saying that truth is the looking at us of a goddess. Truth occurs when something special looks at us. The Greek gods for Heidegger are not particular beings but are guises for Being in general, for the essence of beings, and so the special look is the look of Being. Thus, in Heideggerian terms, truth occurs when Being looks at us. The notion of the “look of Being” (subjective genitive) is a characteristically enigmatic phrase of Heidegger’s later philosophy. But it actually means something very simple, as long as we understand it in the appropriate Heideggerian sense. Heidegger recognizes two forms of looking: the one familiar to us all is the grasping look, the scrutinizing or inspecting of something. But this sort of look rests, for Heidegger, on a more primordial form of looking that does not involve gazing upon but instead amounts almost to the opposite: showing oneself, stepping into the light, offering oneself *to be* gazed upon. This is the particular sense in which Heidegger speaks of the “look of Being.” Thus, what Heidegger means here is exactly what Par-

menides is expressing by calling truth a goddess. Whether it is Being or a goddess that looks upon us, the meaning is the same: truth occurs when we are looked at in a special way, i.e., when the essence of beings in general steps out of hiddenness, when Being disconceals itself and offers itself to our human gaze. Thus Heidegger and Parmenides are expressing nothing other than the Greek understanding of truth, the truth that is more foundational than human, judgmental truth. They are expressing the unveiling on Being's part, the original disconcealment that is presupposed by the human disclosure of things and is thus a condition of human, judgmental truth.

For Heidegger, the Greek experience of a more primordial truth is expressed perfectly in the negative word *a-letheia*. By speaking of truth as "dis-concealment," the Greeks give voice to their experience of beings in general as having stepped forth out of a more original concealment. Accordingly, the negativity of their word expresses the Greeks' understanding that things were in need of an uncovering and that something or someone has uncovered them. It could not be humans that accomplished this uncovering, since humans can act only in regard to what is already uncovered. If there was an *original* concealment, it must have been surmounted—primarily, at least—by that which was concealed, not by humans. Humans could not wrest or force this original disconcealment, since forcing or wresting requires the possession of something unconcealed to contend against.

The disconcealment that has come to pass with regard to things—i.e., truth—is, then, for the Greeks, primarily an affair of Being and not a human affair. The Greeks understand truth to be the *self*-disclosure of Being; they place Being in the lead as regards disconcealment. That is why, for Parmenides, the goddess *leads the philosopher by the right hand* and why, for Heidegger, we can look at things only because Being has first *looked at us*. That is, the leader in the disconcealment is Being; Being takes the initiative in the original disconcealment, Being gives itself to us, Being offers itself to us as a gift. Our human looking is a response to this gift.

We today, however, have no sense of being led by the hand or of being looked at or of being offered gifts, and so we are oblivious to any more original sense of truth than judgmental truth. We now recognize no goddesses, which is to say that goddesses have withdrawn their look from us, goddesses no longer make their presence felt. In other words, we no longer feel looked at by Being, and consequently we know of only one look—our own scrutinizing gaze—and only one disconcealment—the one we perform by our piercing inspection of beings. All initiative is human initiative. All disconcealing is the work of human beings, which is to say that truth is now judgmental truth: it is on *our* side, it is *our* affair, *we* institute it. That is why we have a positive word for it; we are master over

it. Certainly there must also be something to correspond to our true judgments, there must be Being and beings. But these play the secondary role of the follower: they offer resistance. Moreover, even this role is degraded, for we understand it as sheer passivity.

Thus, the transition from the ancient age to our own has been a reversal: the leader and the follower in the partnership of disconcealment have traded places. The Greeks experienced an ascendancy of Being over human subjectivity, and we experience no such thing. For us, the way to truth is research. We must “go around” (= “re-search”) and seek, not sit idly by, waiting. Waiting in fact has for us no active sense; it is merely to be idle and so has fallen into complete disrepute. Today no respectable philosopher or scientist waits for Being or for nature to reveal itself. Philosophers do not wait to be led by the hand, they do not wait for an unveiling; on the contrary, they take matters into their own hands and seek to part the veils by their own effort. This applies all the more to the scientist. One who abandoned the laboratory in favor of waiting would be so out of tune with the times that her erstwhile colleagues would not know whether to laugh at her or cry.

Recalling that the transition between the two ages has also been a translation, let us return to the two words at issue, *a-letheia* and “truth.” From a Heideggerian perspective, how is it understandable that a positive term corresponds to the modern attitude and a negative term to the ancient? If truth is now a human affair, why do we have a positive term for it? The Heideggerian answer is that our word lacks negativity for the simple reason that we recognize nothing more positive than our human subjectivity, nothing that our subjectivity would stand toward in a relation of lack or deprivation. Our concept lacks privation because we are *unaware* of our deprivation. We see ourselves as self-sufficient in our pursuit of truth, in our uncovering of things. We do not recognize things as needing a more original uncovering than the uncovering we ourselves are able to carry out. Nor do we recognize that such an uncovering has taken place or even could take place. Our term is positive, since we sense ourselves to be in the lead, in control, autonomous. Thus, our term actually is positive for a negative reason: we experience ourselves as autonomous because something is hidden to us, namely the self-disclosure of Being, the look of Being. What is hidden to us is the self-disclosure or disconcealment we ourselves did not carry out. We are oblivious to that disconcealment and do not recognize it as having a priority over judgmental truth. We do not see beyond what we call truth to that which it depends on and lacks. On the other hand, the Greek term is negative because the Greeks experienced their own lack of autonomy as regards truth. Thus their term is negative for a positive reason: i.e., the Greeks did experience what is more positive than humans, what has an ascendancy over the human

powers of research into beings (beings that have always already been uncovered in general). The Greek term is negative because the Greeks were aware of a work of un-concealment in the most proper sense, an un-concealment that is more original than human research and that is therefore out of human hands. The Greeks glimpsed a concealment only Being itself could undo. Their word *a-letheia* names this concealment and the undoing of it by the gods. *A-letheia* names Being itself in its work of disclosing itself in advance: in advance of—and making possible—a human relation to beings and a human disclosure of beings. In short, the Greeks saw beyond human truth, and the word *a-letheia* names that which they saw there: Being in its un-concealment, the self-disclosure of Being, the look of Being. Their word is negative because they understood humans to play a secondary role and regarded Being as in the lead.

From a Heideggerian perspective, the crucial question concerns the motivation of these two visions or attitudes, the Greek attitude of according a priority to Being, and the modern one of giving precedence to human subjectivity. How are we to account for the transition between the Greek sight of Being and the modern blindness to Being and thus for the translation of the negative Greek word into the positive modern one? What is it about the modern era that makes the positive word arise? Why does the modern age give the priority to subjectivity rather than to Being? What allowed the Greeks to see beyond human truth; did the Greeks have a more developed eyesight, were they more perspicuous, did they have a greater power of looking? Why did the original Greek vision and word not fare better in history? For Heidegger, to put it as concisely as possible, the transition and the translation were fated. That is, they were not caused by human error or human weakness; the primary responsibility lies on the side of Being, on the side of the gods. It is most emphatically not that in the modern era the presumptuous attitude of humans has caused Being to flee out of *lèse majesté*. It is not human beings but Being itself that has changed.

This change in Being is the transition from approach to withdrawal. Being has changed by offering itself more reticently, by drawing more veils over itself, by looking at mankind less directly. That is the prime motivating factor; Being is the prime mover. If the Greeks could see beyond, beyond human truth, it is not because they were more insightful or wiser than we are today. It is not that the Greeks developed their powers of vision, while we let ours atrophy or go astray. The Greeks cannot take the credit for what they saw and experienced; the credit goes to Being. For Heidegger, the primary reason the Greeks could see more is that Being showed itself to them more wholeheartedly. If the Greeks sensed the presence of the gods, whereas we do not, that is primarily because the gods offered themselves more fully. The Greeks did not surpass us in sensitivity or

intelligence, they did not have greater merits; on the contrary, they were favored. The archaic meaning of “favor” is “face” or “countenance.” To favor someone is to show him one’s face, to regard him, to look at him. That is precisely how, for Heidegger, the Greeks were a favored people; Being freely showed its countenance to them, Being looked at them. Thus the Greeks did not have special powers of looking; on the contrary, something looked *at them* in a special way.

Heidegger often suggests a connection between the history of Being and that of language. Being may approach and withdraw through the vicissitudes of words. From this perspective, the Greeks were favored with the word *a-letheia*; i.e., the favor of the gods came to the Greeks through that word. To possess that word is, ipso facto, to be looked upon with favor. *Aletheia* is the name precisely of that which could be seen and named only if Being showed its countenance, since it is the name of the look or self-disclosure of Being. To experience this self-disclosure is to possess a name for it. Accordingly, the presence of the word *aletheia* marks the Greek age as the first epoch in the history of Being, the epoch in which Being showed itself.

What motivated the transition to the modern age and the translation into the positive word “truth”? In a certain sense, it was simply the withdrawal of the word *aletheia*. Language has withheld that word, and language now speaks to us in terms of “truth.” It is not that human translators were careless or that users of modern languages are less wise than were the speakers of ancient Greek. It is that language itself now addresses humans in words that conceal the genuine face of Being. For Heidegger, then, our positive word “truth” indicates we live in an age that corresponds to the second epoch in the history of Being. That word could arise only in an age in which the gods have fled; indeed, that is the word the gods leave behind in their flight.

Disclosive looking

For Heidegger, the two ages of human chronology can be characterized essentially as the age of *aletheia* and the age of “truth,” and these eras are motivated by the autonomous events in the history of Being. The two eras are motivated by, respectively, the more full self-disclosure of Being and the more reticent self-showing of Being. Yet, for Heidegger, disclosure always involves a partnership, a genuine partnership in which both partners contribute. The primary responsibility for the disclosure rests with Being, but there is no self-disclosure of Being without the active response of humans. They must meet the look of Being with a disclosive look of their own. Otherwise, an understanding of what it means to be

will never arise, no matter how wholeheartedly Being offers itself. This disclosive looking on the part of humans, the active reception of the self-offering of Being, is what Heidegger calls *Entbergen*.

Heidegger's final terms in his characterization of ancient technology, *aletheia* and *Entbergen*, are therefore correlative. *Aletheia* means disconcealment, and since there is always some disconcealment, even in the second epoch, the term *aletheia* can refer to whatever way Being offers itself, whether wholeheartedly or reticently. *Entbergen* then names the corresponding human reception of the self-disclosure of Being. *Entbergen* is the appropriate human looking; the looking that appropriates what is offered by Being. According to our understanding of *Entbergen*, then, let us translate it as "disclosive looking." It is a *looking* (a grasping look) that plays an essential role in the *disclosure* of Being. Thus *Entbergen* is both passive and active: it is a looking, and, as such, it is receptive, not creative. Yet it is not a mere gaping but an active, disclosive looking that must, as it were, meet the look of Being, the self-showing of Being, halfway. Humans must go out halfway toward Being; their looking must stem from an effort at disclosure, from alertness, from sensitivity. Disclosive looking is thus indeed a reception, but an active reception.

For Heidegger, this disclosive looking on the part of humans varies in an essential way according to what is offered. The disclosive looking of the ancient age differs from that of the modern era. It is as if the self-disclosure of Being always calls up the disclosive looking appropriate to it. The more vigorous is the self-disclosure of Being, the less active is the looking on the part of humans, and the more receptive it can be. That is true in a sense. The Greeks were accepting, whereas we in the modern age distrust appearances and instead construct, in science, our own substitute for the apparent world. From a Heideggerian perspective, however, it in fact requires more disclosive power to look at things acceptingly and humbly, and so the more forceful self-unconcealing of Being actually calls up a more forceful, more active, looking on the part of humans. The withdrawal of Being takes this forceful looking from us, and so the scientific construction of reality, characteristic of the modern age, is actually less active than the Greek sensitivity to what is simple. The truly disclosive eyes are the ones attuned to what is simple and naive; the modern construction of scientific reality is, by comparison, feeble in its attempt to compensate for the lack of those eyes.

Technology and truth

Where have we strayed? Here we are, speaking of gods and goddesses, of Being in general, of truth, of the look of Being, of the understanding of

Being that requires a disclosive looking on the part of humans. What has all this to do with technology? Technology is a matter of making things, doing things, is it not? Technology is, as Heidegger says, a matter of ends and means, i.e., instrumentality. What has instrumentality to do with the understanding of Being in general; what has instrumentality to do with truth? According to Heidegger, it has *everything* to do with truth:

Where have we strayed? We are asking about technology and have now arrived at *aletheia* and disclosive looking. What has the essence of technology to do with disclosive looking? Answer: everything. For all producing is based on disclosive looking. . . . Technology is therefore no mere means. Technology is a mode [Heidegger's marginal note: "or, rather, *the*, decisive, mode"] of disclosive looking. If we pay heed to this, then an entirely different realm of the essence of technology will open itself to us. It is the realm of disclosive looking, i.e., the realm of truth. (FT, 13/12)

For Heidegger, technology is in essence nothing other than an understanding of what it means to be. Technology has to do with the way we understand Being in general. Technology is the way we think Being, i.e., the way we understand what it takes for something—anything—to be. Technology is thus an affair of first philosophy, ontology; and so technology is what makes Dasein be Dasein: i.e., technology makes Dasein a place where Being is understood.

More specifically, technology is our way of disclosive looking in response to the looking upon us of Being. Technology is the way we play our role of partner with Being in the disconcealment of what it means to be. Technology names the way we look back at Being and confirm what Being offers to us in its own look, in its self-disclosure. That is why Heidegger says the realm of technology is the realm of truth: i.e., technology concerns the most universal and basic of all truths, namely the disconcealment of Being in general, the disconcealment that is the prerequisite for all other human relations to particular beings.

Thus technology is a theoretical—not a practical—affair. Technology is not directed toward making things, doing things, finding means to ends, instrumentality. More precisely, technology is *primarily* a theoretical affair. There is a practical side to technology, but that is secondary; it *follows* upon the theoretical understanding. Technology is, of course, related to making things and doing things, but it is so related only because technology first of all is an understanding of what things are in general. Technology does determine our doing and making, but only because it determines what we take to be a thing in general in the first place. Technology is not practical directly, but only indirectly: by disclosing to us what constitutes beings, it provides us with a guideline that governs all our relations to beings, including our practical relations. It is in virtue of

the truth disclosed in technology, i.e., in virtue of its theoretical significance, that technology is practical. Technology can do things only on account of what it sees, and what it sees is that which makes a being be a being at all.

Technology is the disclosure of the essence of things; technology is the seeing of the *eidōs* in advance. Technology concerns the understanding of Being that is required in advance for any human relation to beings, for any human activity directed to beings. Thus technology is comparable to the seeing in advance of the *eidōs* on the part of an individual artisan. Just as the artisan fashions a thing in conformity to the essence he beholds in advance, so technology in general is the beholding of the essence of all things in advance, in light of which humans fashion things and can take any stance at all toward things. Therefore instrumentality or making things is a secondary phenomenon of technology, just as the actual fashioning of the house or chalice is a secondary and inferior affair in relation to the seeing of the *eidōs*. What Heidegger means by technology is the primary and superior affair, namely, the theoretical understanding of Being in general that guides all practical dealings with individual beings; so for him technology is primarily a way of looking or understanding, a disclosure of truth, not a way of doing, not instrumentality.

The Greek concept of technē

Indeed this is, as Heidegger admits, a strange prospect, but for him the same prospect opens up if we proceed not from an analysis of instrumentality, from what is required for making and doing things, but from an analysis of the word “technology” itself or, rather, from the Greek word from which it is derived, *technē*. From this standpoint as well, we will see that technology is primarily a matter of our understanding of Being, a matter of our sense of what it takes to be a being at all. What then does *technē* mean for the Greeks?

The main paragraph on this issue in “Die Frage nach der Technik” is an extremely compact one. Heidegger has also treated the exact same issue elsewhere, in a full commentary on the passage he cites here from Book VI of Aristotle’s *Nicomachean Ethics*. The full commentary (PS, 21–188/15–129) takes 168 pages! Let us first examine what Heidegger has compressed into this one paragraph and then turn briefly to his fuller exposition. The main point of both expositions is the same: as the ancients understood it, *technē* is primarily theoretical, not practical. *Technē* is essentially a matter of seeing or knowing, not doing or making, and what *technē* sees is Being, the essence of beings.

Here in the essay on technology, Heidegger makes this point by referring *technē* to two other Greek words: ἐπιστήμη (*epistēmē*, “knowledge”)

and ἀληθεύειν (*aletheuein*, “to disclose the truth”). First of all, Heidegger asserts that, for the ancients, even up to the time of Plato, the word *techne* “goes together” with the word *episteme*. Heidegger means this “going together,” of course, in the sense of a convergence of meaning. It is especially Plato that Heidegger has in mind; Aristotle will eventually contrast *techne* and *episteme*, but in Plato the two terms are nearly interchangeable. In particular, Plato does certainly not contrast *techne* and *episteme* in the sense of the distinction between making and knowing, the practical and the theoretical. For Plato and the earlier Greeks, both *techne* and *episteme* simply mean knowing: “Both words are names for knowledge in the broadest sense” (FT, 14/13).

In another place, Heidegger expresses his understanding of the Platonic sense of the word *techne* when he associates that sense of *techne* with wonder, as we have already mentioned. For the Greeks, wonder is an attitude rooted in the knowledge of Being in general; what is wondrous is that Being is disclosed to us. According to Heidegger, the source of wonder can also be called *techne*, for *techne* is our grasp of Being in general; and so *techne* is an affair, not of practice, but of *episteme*. Indeed it follows that *techne* must then go together with the highest *episteme*, the highest theoretical knowledge:

We only have to be mindful that *techne* still, precisely with Plato, at times assumes the role of denoting knowledge pure and simple, and that means the perceptual relation to beings as such. Now it is clear that this perceiving of beings in their unconcealedness is not a mere gaping, that *techne* is carried out rather in a procedure against beings, but in such a way that these themselves precisely show themselves . . . in their essence, *eidōs*, *idea*. . . (GP, 179/154–155)

Techne, as a disclosure of beings as such, is not a mere gaping; it is carried out “against” beings. That means that it goes out to meet beings halfway; it is the appropriation of the self-disclosure of beings as such. *Techne* takes effort; it is not a passive receiving. Heidegger even calls the looking that characterizes the *techne* of the Greeks a kind of violence (EM, 159ff/126ff). It is a violent looking in the sense that it involves a struggle and an overcoming; namely, with regard to the pervasive, superficial way things ordinarily appear. *Techne* is carried out against the everyday appearance of things; the person with *techne* has made the effort to see the essence that is hidden to perfunctory sight. On the other hand, *techne* is also a submissive looking; it is not against, but precisely in service to, the hidden essence.⁴ Thus *techne* is the active appropriation we have called disclosive looking, the seeing in advance of the essence of things. And that is why *techne* is the seeing of the Ideas in the Platonic sense. For Plato, Being, the essence of things in general, is called *eidōs* or *idea*. Accordingly,

techne is central to the Platonic doctrine of Ideas, since *techne* is precisely our grasping of the Ideas, of beings as such, of Being itself:

Without wishing to preempt a discussion of the doctrine of Ideas, let us merely remark that we will understand the genesis, the primary sense, and what is opaque in Plato's Ideas only if we remain oriented toward the place where the *eidos* first steps forth quite naturally, i.e., in which mode of disclosure it explicitly emerges. . . . It is precisely *techne* that is the ground upon which something like the *eidos* becomes visible in the first place. (PS, 63/33)

The point is that the grasp of the Ideas, of Being, of what is wondrous, is the highest *episteme*, the highest theoretical knowledge, and so *techne*, as the prime grasp of the Ideas, is *episteme*. That is what Heidegger means by saying that *techne* and *episteme* "go together" for Plato and the earlier Greeks. To put it more fully, we could say that for Plato all these words go together: *techne*, *episteme*, wonder, Being, essence, Idea, knowledge. *Techne* is then not simply knowledge, as opposed to practice; it is even the highest knowledge. Thus the first connection Heidegger makes, between *techne* and *episteme*, signifies that *techne* is the Greek name for knowledge in the most proper sense, i.e., the name for our understanding of Being in general. This then confirms what Heidegger determined in regard to *techne* when he approached it from the viewpoint of causality and production: the domain of *techne* is the realm of truth, of knowledge, of theoretical looking. *Techne* is not the mere practical manipulation of things.

Heidegger goes on to say, in the paragraph we are discussing from "Die Frage nach der Technik," that Aristotle does distinguish *techne* from *episteme*. But the distinction is still not that between practice and theoretical knowledge. On the contrary, for Aristotle the distinction lies entirely *within* the realm of theoretical knowledge; it is a distinction between two modes of knowledge, two modes of disclosive looking. That is what Heidegger expresses by connecting *techne* to the other Greek word we cited above, *aletheuein*. That is, *techne* and *episteme* are both modes of *aletheuein*: "In a most remarkable passage (*Nicomachean Ethics*, Book 6, chapters 3-4), Aristotle indeed distinguishes between *episteme* and *techne*; but he does so specifically with respect to what they disclose and how they disclose. *Techne* is a mode of *aletheuein*" (FT, 14/13).

What is *aletheuein*? The word is a verb derived from *aletheia* and so means to get at the truth, to see the truth, to look disclosively upon things. In the cited passage from the *Nicomachean Ethics*, Aristotle lists five modes of *aletheuein*, i.e., five ways of access to the truth. What is so significant for Heidegger is simply that *techne* is one of those five. *Techne* is a way of looking disclosively upon beings. Thus *techne* is not divorced

from disclosive looking, the way practice might be distinct from theoretical knowledge; on the contrary, *techne* is a matter of knowledge. What then, for Aristotle, is the difference between *techne* and *episteme*, between *techne* and knowledge pure and simple? As Heidegger says, they differ with respect to what they disclose and how they disclose. *Episteme* discloses what is unchangeable, *techne* what is changeable. And *episteme* is disclosure for its own sake, while *techne* has an ulterior motive beyond mere disclosure. Thus *episteme* is literally knowledge pure and simple: it is knowledge of what is simple (the eternal and unchangeable), and it is pure knowledge (for its own sake). Let us delve a little more deeply into this basic characterization of *episteme* in order to understand how *techne* differs from it.

For Aristotle, knowledge does not change. What most properly deserves the name knowledge is constant and permanent. But such a knowledge is possible only of unchanging objects. For Aristotle it is primarily the object that determines the character of the knowledge, not vice versa. There can be genuine knowledge, then, only of what is changeless, and what is changeless is eternal, never having come into being and never going out of being. Hence, there is no genuine knowledge of individual things; knowledge is possible only of the principles of things, the essences of beings (in Plato's terms, the Ideas), and the ultimate principle of beings is Being. The most genuine knowledge is then ontological knowledge, and this more than anything else deserves to be called knowledge, *episteme*. Accordingly, there is only one genuine *episteme*, and that is philosophy or the understanding of Being as such. This knowledge has no ulterior motive, since the object of the knowledge, Being, cannot be influenced or manipulated or changed in any way. This knowledge is disclosive looking for the mere sake of disclosure; it is purely theoretical.

Techne, in contrast to *episteme*, is knowledge of changeable things; its objects come and go and change in various ways, and so *techne* cannot be considered knowledge in the most proper sense. In particular, its objects are not the changeable things of nature, which come and go of themselves, but the things that come and go due to a role played by the one who possesses the *techne*. This person discloses what does not yet exist concretely; and that disclosure is subject to change, since the thing may turn out differently than it was envisioned. This is how Heidegger expresses the object of *techne*, to continue the quotation above: "*Techne* is a mode of *aletheuein*. Its object is not that which produces itself [= natural things]; but instead it looks disclosively upon that which does not yet exist before us and which may for that reason turn out to look one way or another" (FT, 14/13).

Moreover, *techne* discloses this object with an ulterior motive, to produce it. *Techne* does have a practical goal. Thus *techne* is not knowl-

edge pure and simple: it is not simple, because its objects are connected to coming and going; and it is not pure, because it is for the sake of producing here before us that which it sees in advance. Nevertheless, it does partake of knowledge, since what is primary in *techne* is the seeing in advance of the essence. The actual construction of the thing, for Aristotle, can be left to slaves. Their masters contemplate and see. They see not the concrete thing but the essence of the thing in advance, and this object to a certain extent does escape from change. The essence is not an individual thing but a principle or an Idea; it is something ideal and so shares, at least to some extent, in eternity and unchangeableness. Essences do not come and go as do individual things; the essence is the unchanging Being of the changing being. Thus, according to Heidegger, Aristotle lists *techne* among the modes of *aletheuein* because *techne*, in what is decisive about it, does disclose something akin to an eternal truth, not the most universal of truths, perhaps, and not purely for the sake of disclosure, but nevertheless an object of stable knowledge: an ideal essence, the Being of some particular being. *Techne* is indeed more practical than *episteme*, but the practical aspect of *techne*, its practical role, is not manipulation but is merely the guiding or ordering of the process of manipulation, just as the master orders the slave about. *Techne* can play this role precisely because it has looked upon something disclosively, because the master has seen an essence in advance, because the master has theoretical knowledge. It is as a disclosive looking that *techne* plays a practical role. The quotation above from “Die Frage nach der Technik” then continues with Heidegger repeating the familiar analysis of *techne*:

Whoever builds a house or a boat . . . looks disclosively—in advance—upon the essence and the matter of the boat or house and gathers them into a view of the finished thing. Then from this view in advance of the finished thing he determines the manner of construction. Consequently, what is decisive in *techne* does not at all reside in making and manipulating, nor in utilizing means, but in the aforementioned disclosive looking. It is as a disclosive looking, and not as a manufacturing, that *techne* is a producing. (FT, 14/13)

That is the end of the compressed paragraph in which Heidegger connects *techne* to *episteme* and *aletheuein* and in so doing explicates the Greek sense of the word from which our term “technology” is derived. This examination of what the Greeks themselves mean by *techne* is intended to confirm the strange prospect that opened up when we thought through the notion of technology as production or instrumentality. That prospect is the view that technology is only secondarily practical and is primarily theoretical. *Techne* does have a practical or instrumental application, yet what the Greeks mean by *techne* is not the application but

the theoretical knowledge that makes the practical application possible. And that is also what Heidegger means by technology. In the proper sense, technology is seeing rather than doing; and its proper realm is truth rather than instrumentality, knowledge of Being rather than manufacture of artifacts. And so, having linked *techne* to *episteme* and *aletheuein*, Heidegger concludes:

In this way, therefore, our investigation into the meaning of the word *techne*, as determined in the Greek manner, has led us to the same context that opened up when we pursued the question of what instrumentality as such is in truth.

Technology is a mode of disclosive looking. Technology resides in the domain of disclosive looking and disconcealment, i.e., where *aletheia*, truth, occurs. (FT, 14–15/13)

With regard to Aristotle and his assertion that *techne* is a mode of *aletheuein*, Heidegger's exposition here in the essay on technology is content to show that and how *techne* involves a disclosive looking at all. Heidegger here demonstrates merely a minimum sense in which *techne* is theoretical knowledge: *techne* is the disclosure in advance of the essence of some being, the Being of some being. Yet *techne* is still tied to the particular and the practical. It does not appear to disclose Being in general, truth in general, which it cannot do as long as it is governed by an ultimate intention to fabricate. For Aristotle, then, it would seem, the connection between *techne* and *aletheia* is a tenuous one. *Techne* just barely escapes the realm of the particular and changeable and so just barely qualifies as knowledge.

Actually, for Heidegger, the view of *techne* just expressed is merely Aristotle's initial position. Aristotle developed and deepened his view, steering *techne* away from the particular and the practical, toward the general and theoretical, until, finally, *techne* appears to coincide with philosophy itself, with the understanding of Being in its universality. Heidegger exposes this development and deepening in his full, 168-page commentary on the passage in question from the *Nicomachean Ethics*. Heidegger's commentary is intricate, and this is not the place to enter into the intricacies. Yet we need to see the overall thrust of Heidegger's argument, and we can delineate the main points briefly, provided we paint with broad enough strokes.

At the beginning of Aristotle's account of the modes of *aletheuein*, he makes a division into two. In Aristotle's own terms, it is a division into the modes that contribute to knowledge and those that contribute to deliberation. We deliberate about that which we can change in practice, and so Aristotle's distinction is between the theoretical and the practical. Initially, Aristotle does indeed consider *techne* one of the practical modes

of disclosure. He places *techne* on the practical side, along with *φρόνησις* (*phronesis*), which is prudence or practical judgment regarding what is properly human. On the other hand, the main theoretical ways of access to truth are *episteme* and *σοφία* (*sophia*, “wisdom”).

Aristotle focuses on the common modes of disclosure within each division. These are *episteme* for the theoretical and *techne* for the practical. In Heidegger’s eyes, the most significant question Aristotle poses to these two modes is his first question: what is the paradigm of each? Aristotle expresses this question in various ways; he asks about the highest state (*βελτίστη ἕξις*, *beltiste hexis*), the consummation (*τελείωσις*, *teleiosis*), or the excellence (*ἀρετή*, *arete*) of each. That is, what is each tending toward; in what is each fulfilled; what would each look like, if completely developed?

On the theoretical side, Aristotle has little difficulty in finding the paradigm of *episteme* in wisdom. Wisdom is for Aristotle the highest form of knowledge, and it amounts to theory, pure gazing upon or contemplating the “most honorable” of all things, namely Being in its universality. Wisdom (*sophia*) is thus equivalent to philosophy (*philo-sophia*), the knowledge of what it takes for something to be.

What is the paradigm of *techne*? Aristotle denies that it is *phronesis*; *techne* does not tend toward practical judgment regarding the human good. For Heidegger, Aristotle rejects *phronesis* as the highest form of *techne* because the Stagirite recognizes in *techne* a tendency away from practice and toward an “autonomous *episteme*.” According to Heidegger, Aristotle is in this regard merely basing himself on the common everyday way of according honor to the one who has *techne*. In Heidegger’s paraphrase, this is how Aristotle expresses the respect everyday Dasein pays to *techne*:

One who possesses *techne* is not honored primarily for the role he plays in making things, the practical things which fulfill the necessities of life or which serve recreation and pleasure. He is honored simply because he advances our knowledge of beings, simply because he *discloses* something or other, beyond what just anyone can see, whether this is useful or not, whether it is great or small. Such a one is then credited with wisdom. (*PS*, 93/64)

Heidegger finds Aristotle confirming this same sentiment when the Stagirite gives precedence to the one who has *techne* over and against the one who has experience:

The one who has *techne* is admired, even if he lacks the practical skill of the hand-laborers, precisely because he sees the essence. He may thereby fail in practice, for practice concerns the particular, whereas

techne concerns the universal. Despite this shortcoming with regard to practice, the one who has *techne* is still respected more and considered wiser: in virtue of his privileged way of looking disclosively. (PS, 76/52)

The tendency toward an autonomous *episteme* is expressed most explicitly by Aristotle in his determination of the paradigm of *techne*. In Book VI of the *Nicomachean Ethics*, Aristotle finally decides on wisdom, *sophia*, as the consummation of *techne*. Thus *techne*, which Aristotle initially placed on the practical side, among the practical modes of disclosure, attains its highest state on the theoretical side. That is of the utmost importance for Heidegger. *Episteme* and *techne* have the same highest state. They both tend toward *sophia*, toward knowledge in its purest and simplest form, i.e., toward the most universal and theoretical form of knowledge, which is knowledge of the highest or “most honorable” object, namely Being. Thus *techne* is ordered toward an understanding of what it means to be in general. As Heidegger formulates it, *techne* in Aristotle tends to be conflated with “philosophical reflection,” “genuine understanding,” “the most rigorous of all sciences”:

What is most striking now is that Aristotle designates *sophia* as the *arete*, “excellence,” of *techne* (*Nic. Eth.* VI, 7; 1141a12). The highest mode of *aletheuein*, philosophical reflection, which according to Aristotle is the highest mode of human existence, is at the same time the *arete* of *techne*. (PS, 56–57/39–40)

Aristotle remarks explicitly (*Nic. Eth.* VI, 7; 1141a11f.): “Genuine understanding, *sophia*, is the consummation, *arete*, *teleiosis*, of *techne*, of the know-how employed to construct something.” (PS, 68/47)

By calling *sophia* the consummation (*teleiosis*) of *techne*, Aristotle is designating it as the *telos* (“final cause”) of *techne*. Furthermore, as Heidegger remarks, for Aristotle the *telos* is not extrinsic. It is not *outside* of the thing whose *telos* it is; it is not merely an exterior goal. On the contrary, it most properly belongs to the thing; the *telos* defines the thing. It is in virtue of its *telos* that the thing is most properly what it is. Accordingly, *sophia*, the consummation of *techne*, designates what *techne* most properly is. *Techne* is most properly *sophia*, the purest and highest theory, the understanding of Being in general.

That is the full significance of Aristotle’s statement in the *Nicomachean Ethics* that *techne* is a mode of *aletheuein*. Heidegger’s long exposition of it is meant to establish, in their most radical form, the conclusions asserted in the essay on technology: as the Greeks understood

it, *techne*, technology, is a disclosive looking; it is primarily theoretical; it aims at the universal; its domain is the realm of truth; it has to do with the way we understand Being in general. The strange prospect is thus confirmed, the one that opened up when we thought through the notion of technology as production or instrumentality, the prospect that the instrumental or practical aspect of *techne* is not its most proper determination. Most properly, *techne* concerns the understanding of Being, the understanding that guides the production. Our sense of Being, of what it means to be, determines how we make and do things, and that sense of Being is what the Greeks mean by *techne* and what Heidegger means by technology. Technology is *Entbergen*, i.e., the way we look back disclosively in response to *aletheia*, in response to the looking upon us (or self-showing) of Being. Technology is thus the same as theory, thea-hory; it is constitutive of Da-sein as such. What results from this partnership in disclosure (i.e., the resulting understanding of Being in general) will determine how we humans make things and how we understand the making of things. Technology is not practice; technology is the theory that determines the practice.

Ancient technological practice as poiesis

What then, to conclude our examination of ancient technology, is the specifically ancient sense of Being? What is disclosed in the disclosive looking that comprises ancient technology? What is the ancient understanding of Being, and what sort of making or production follows from that understanding?

To put it as succinctly as possible, for Heidegger the ancient understanding is that Being in general is nature; all things that have come to be have been self-emergent, self-disconcealing. Thus the ancient names for Being are *physis* (“nature,” “self-emergence”) and *aletheia* (“truth,” “disconcealment”). And the ancient understanding of producing things is nurture, respect for nature and gearing into nature, i.e., abetting what is self-emergent to be fully self-emergent, fully visible. The Greek word for making, understood in this way as a producing or leading forth by the hand, as an abetting, is *poiesis*. Ancient technology in practice is *poiesis*.

Accordingly, for the ancients, the distinction between the natural and the man-made is blurred. All making, all production, is natural, is self-emergence. There is, for the ancients, no strict distinction between growing and producing: humanly produced things merely require more assistance to grow, to come into the light, and that is all; they still are in essence self-emergent. For the ancients, in a sense all things are alive, since all things are natural, all things are self-emergent. The prime mover in every being that has come forth is within that being; i.e., the prime mover

is nature, the inner impetus to self-emerge. Some things indeed require human assistance, but then the human artisan is understood simply as a midwife; he merely abets or releases an already extant urge toward self-emergence, even if that urge is imbedded in a block of marble. The human artisan is not the prime mover but is only an ob-stetrician, someone who “stands there” in an abetting way. That is why the paradigm of the maker is the counselor, the farmer, or the doctor, and why there is no strict distinction between the farmer and the sculptor: neither imposes existence. They both pro-duce in the strict sense; they both take something by the hand and lead it forth into visibility, they both release it, set it free, uncover it. The crops in the field, the witness in court, and the statue in the atelier are all produced in the same sense. They all require a human hand, but there is a hidden artisan which is the *prime* mover; that hidden artisan is Being, nature, the inner urge to self-emergence. The human hand is merely the midwife’s hand.

Indeed, in the modern age as well, the distinction between the artificial and the natural is blurred. In the sharpest opposition to the first epoch, however, now everything tends to be understood as man-made. Natural growth has given way to human imposition. Nature is no longer the prime mover; humans understand *themselves* as the prime responsible agents everywhere. What used to come about by nature, such as birth and death, the course of rivers, the powers of human memory, the emotions, the crops, the amount of white meat on a turkey, the strength of the odor of a rose, and so on and on, are now imposed by humans. For Heidegger, this modern situation is most dangerous and yet not without promise, and to his analysis of it we now turn.