

3

THE HAMMER OF THE GODS

3.1 WHAT IS TECHNOLOGY?

When talking about technology, there are typically three different positions one can take. **First**, one can take a *pessimistic* position, and describe technology as a dominating force, as a power that is taking over the world, as a power that we must try to stop, if stopping it, or even controlling it, is even possible. **Second**, one can take an *optimistic* position, and describe technology as a liberating force, as a power that is fixing the world, as a power that we must try to expand, bringing technology to as many people, in as many places, for as many problems, as possible. **Third**, one can take a *neutral* position, and describe technology as not a force but as a particular set of objects, a set of objects that, like any other objects, are neither positive nor negative, as they are merely means to ends, ends chosen, and made positive or negative, by people.

Technology can be seen as life-destroying, as life-preserving, or as lifelessly instrumental. Yet to claim any one of these positions as defining what technology *is* is to be immediately criticized by those holding either of the two other positions for having overlooked something crucial about the nature of technology. For a pessimist to hold up the **iPhone as an example of how technology is turning us all into zombies is to have to face**, on the one hand, arguments about how the iPhone has been vital to keeping us informed, entertained, and even politically active and, on the other hand, arguments about how the iPhone is just a

device, and a device can have no power other than what we give it. For an optimist to champion the self-driving car as an example of how technology is empowering is to have to face, on the one hand, arguments about how self-driving cars are just another technology that are stealing our jobs and, on the other hand, arguments about how a car being driven by programming is still a car being driven by a human. For a neutralist to point out how even the internet is not a force for good or evil but merely a complicated combination of devices is to face, on the one hand, arguments about how the internet is turning us into trolls and, on the other hand, arguments about how the internet is turning us into gods.

3.2 HEIDEGGER AND TECHNOLOGY

In his 1955 lecture, “The Question Concerning Technology,” Martin Heidegger attempted to find a solution to the seemingly intractable problem of defining technology by providing an analysis of the “essence”¹ of technology. According to Heidegger it is only through such an analysis that we can free ourselves from our preconceptions about technology and so “experience the technological within its own bounds.” Heidegger continues:

the essence of technology is by no means anything technological. Thus we shall never experience our relationship to the essence of technology so long as we merely represent and pursue the technological, put up with it, or evade it. Everywhere we remain unfree and chained to technology, whether we passionately affirm or deny it. But we are delivered over to it in the worst possible way when we regard it as something neutral; for this conception of it, to which today we particularly like to pay homage, makes us utterly blind to the essence of technology.²

Heidegger here not only makes clear that he is a pessimist when it comes to technology but further suggests that our situation with regard to technology is so dire that it matters little whether we are pessimistic or optimistic. Rather what should concern us according to Heidegger is the neutral position—the position that he assumes most people take—

for it is neutrality that leaves us the most vulnerable, the most “blind,” to the essence of technology.

The blindness of neutrality is, ironically, a result of the neutralist being “correct”³ in defining technology as instrumental, as for Heidegger a definition being *correct* is not the same as it being *true*. While a correct definition is *relevant*, it is not *revelatory* in the way that truth is, and thus it puts forth a part of an answer in place of the whole, like reducing someone’s identity to their nationality. For this reason Heidegger moves from asking what the essence of technology is to asking what the essence of instrumentality is, moving, like Socrates, through interrogations of the merely correct in order to reach the ultimate truth. In this way Heidegger discovers that the truth of technology, what is revelatory about technology, is that technology is itself *a way of revealing*. As Heidegger writes, “If we inquire, step by step, into what technology, represented as means, actually is, then we shall arrive at revealing. The possibility of all productive manufacturing lies in revealing.”⁴

To produce, to manufacture, is to make something appear, to make visible how physical materials, technical concepts, and cultural practices can be gathered together in order to create a product. This product can be used, can be judged, and can be made significant, such that it can be identified as the product that it was intended to be. In this way, according to Heidegger, technology reveals through the mode of “bringing-forth,”⁵ through not only turning what is potential into what is actual but through showing what nature and humanity are capable of, what each means for the other, what each can do for the other. Or at least this was true of ancient technology, for as Heidegger argues, while modern technology is still a way of revealing, it reveals instead in the mode of “challenging-forth.”⁶

Ancient windmills and ancient bridges helped people to see the power of wind and the power of water, that wind and water were forces to be reckoned with, to be respected, to be named, honored, and even deified. The windmills and bridges of today still reveal wind and water to us as power, however what is revealed is not power to be respected but power to be “stockpiled,”⁷ to be packaged, stored, and made available on demand, like a battery, or what Heidegger calls “standing-reserve.”⁸ The reduction of nature from a godlike force to a controllable energy source is what Heidegger sees as the defining feature of modern technology, as what has led humanity to take ourselves to be a godlike

force, to be the beings for whom not only technology but the natural world that technology mines, harvests, and stockpiles is seen as mere instrumentality, as mere means to our ends, as existing merely to satisfy our demands.

Yet Heidegger points out that this is precisely what is dangerous about the neutralist position, for viewing technology as instrumentality, as instruments *for us*, is to become blind to how we too have come under the rule of instrumentality, how we too have become instruments, instruments *for technology*. That modern technology has reduced nature to an on-demand power source, to a power source that we can control, does not mean that we are ourselves the masters of this process of reduction and subservience, for we have likewise been reduced and made subservient as standing-reserve, as we must be available on demand in order to control and make use of these on-demand power sources as needed. In other words, modern technology not only challenges nature, revealing nature as a power source to be stockpiled, but first and foremost challenges humanity, revealing humanity as the power source to do the stockpiling.

Of course, to refer to something as on *demand*, as available as *needed*, is to be taken to imply that these demands and needs are human, and thus even if humans have been made subservient, they have nevertheless been made subservient to the demands and needs of other humans. In this way we are tempted to argue against Heidegger's pessimism that, even if we are not personally the ones who are in control of instrumentality, humans must still ultimately be in control, and must still be above the level of instrumentality. Modern technology may have reduced nature, but nature has been so reduced *for humanity*. Or at least that is how our situation appears to us. What Heidegger wants us to see however is that while we may work in the service of industries—of industries owned and operated by humans—these industries are operating under a logic that is not a human logic meant to serve human demands and needs but rather the logic of modern technology, a logic meant to serve the demands and needs of modern technology.

Heidegger argues though that what is driving humanity to serve modern technology is not itself anything technological but is, rather, part of the “challenging-forth” that is driving modern technology. What has challenged both humanity and technology to come under the logic

of instrumentality is what Heidegger calls “*Gestell*” or “Enframing,”⁹ a reappropriation of a German word (*Ge-stell*) meant to make clear how humanity and technology have both been gathered (*Ge-*) and forced to reveal themselves (*-stellen*) in the mode of standing-reserve. Using the example of a lumberjack, Heidegger argues that both a lumberjack and his grandfather could walk through the same forest, but they would not walk through the forest in the same way for the same reasons.¹⁰ The lumberjack in the forest today is there because he is paid to be, paid in order to chop wood, in order to produce paper, in order to make newspapers and magazines, in order to sell products and opinions to the public. The lumberjack may appear to be working for the forestry industry, but the forestry industry is itself working for industries within industries and, therefore, the lumberjack is ultimately working within the logic of the *in-order-to*, the logic of Enframing.

What Heidegger is specifically concerned with here is that while Enframing reveals what we can do with nature—we can use modern technology to turn trees into shapers of public opinion—Enframing at the same time conceals our ability to see nature as anything but what we can do with it, and thus conceals that we can exist as anything other than manipulators of nature. Technology itself does not worry Heidegger—“What is dangerous is not technology”¹¹—but rather it is the “destining”¹² of technology to become the challenging-forth found in modern technology that Heidegger sees as the true danger. In particular Heidegger focuses on how the history of technology has culminated in our becoming enraptured by Enframing, by instrumentality, by challenging-forth, and thereby losing sight of the noninstrumental possibilities of bringing-forth that were revealed in ancient technology. Because this outcome was already present as a possibility in ancient technology, as the fate of bringing-forth to become challenging-forth, Heidegger is not simply arguing for a return to ancient technology since today, under the rule of Enframing, we are incapable of seeing ancient technology as anything other than a primitive form of modern technology, as anything other than primitive instrumentality.

Once instrumentality becomes the only mode of revelation and thus becomes simply how everything appears to us, Heidegger argues that we will no longer be aware that revealing is taking place, that a particular way of seeing the world is being revealed to us, resulting in revelation and concealment themselves becoming concealed. It is at this point

that humanity would truly have reached the level of mere standing-reserve, seeing the world, God, ourselves only through instrumentality, only through the logic of the in-order-to, relying on the *correct* version of reality to be effectively sufficient such that we no longer inquire into the *truth*, such that inquiry itself would no longer be pursued, except *in order to* satisfy a demand. Yet Heidegger believes that so long as inquiry is possible, so long as we can question the essence of technology, then we can free ourselves from the grip of Enframing. For such questioning to take place however we would need something that could again motivate and inspire our curiosity, and the possible source of such motivation and inspiration Heidegger finds in art. Because art is “akin to the essence of technology” and “fundamentally different from it”¹³—for which reason, according to Heidegger, the Ancient Greeks called both art and technology *technē*—art has a power to reveal, a power to reveal that could rival modern technology’s power to conceal.

Much more can be said about Heidegger’s lecture but, for our purposes here, this overview should be sufficient to see how Heidegger can help us in trying to make sense of technology. Heidegger is clearly pessimistic about the technological world in which we find ourselves, arguing throughout that we have become enslaved to technology and to the instrumental way of seeing the world that modern technology reveals. However it is important to note that he is not pessimistic about humanity, as he also argues throughout that we are not the ones who have done the enslaving. The history of humanity is not to blame for our predicament, according to Heidegger, but rather something more like the history of Being, the history of revealing, the history of the revealing of Being, in which humans play a vital role, but of which humans are not the prime movers.

As we have already seen, even when Heidegger criticizes those who take a neutralist stance toward technology, he still describes the neutralist as having been “delivered over to” this stance. Similarly, when Heidegger begins to investigate the neutralist stance by questioning what instrumentality means, he moves from instrumentality to causality to Aristotle’s “doctrine of the four causes.”¹⁴ Heidegger makes this move in order to show how we have today collapsed causality to one cause, to “*causa efficiens*,” to the cause where we typically locate the role humans play in causality, a collapse which is indicative of the relationship between instrumentality and causality, of means/ends thinking

taking over cause/effect thinking. To challenge this view, Heidegger does not merely argue that we need to return to Aristotle and appreciate the role of the other three causes but rather argues that we need to return to Aristotle in order to see that we are wrong to view humans as *causa efficiens* in the first place. Heidegger writes, “Finally there is a fourth participant in the responsibility for the finished sacrificial vessel’s lying before us ready for use, i.e., the silversmith—but not at all because he, in working, brings about the finished sacrificial chalice as if it were the effect of a making; the silversmith is not a *causa efficiens*.”¹⁵

The silversmith does not create the silver chalice but rather participates in the creation, sharing “responsibility” for creation with the three causes, with the *causa materialis* (silver), with the *causa formalis* (chalice-ness), with the *causa finalis* (ritual). The three causes are responsible for the chalice in the sense that the chalice is “indebted” to the causes for its existence. Yet the responsibility of the silversmith seems to be of a different order as, for Heidegger, the silversmith appears to be “responsible” for the chalice in the sense of having the *ability to respond*, in the sense of having *answered the call* of the three causes so as to gather them together to bring forth the chalice. Heidegger’s thought here seems to be similar to the description of sculpture by Michelangelo put forth in one of his sonnets, which begins:

The best of artists hath no thought to show
Which the rough stone in its superfluous shell
Doth not include: to break the marble spell
Is all the hand that serves the brain can do.¹⁶

The sculptor does not create sculptures from out of nothing but responds to what is present in the stone, revealing what is already there. Heidegger however expands this thought to seemingly apply to any activity we would typically describe as human creativity, even applying it to Plato, as he writes, “The fact that the real has been showing itself in the light of Ideas ever since the time of Plato, Plato did not bring about. The thinker only responded to what addressed itself to him.”¹⁷

The idea that humanity’s role is to answer the call of Being, to bear witness to Being, to let the truth of Being reveal itself, can be found throughout Heidegger’s philosophy.¹⁸ Yet if the purpose of Heidegger’s philosophy of technology is to argue that we need to question Enframing such that we can attain a “free relation” to technology, it is not clear what would be gained by having won our freedom from technology if

seemingly we would nevertheless not be free to be much more than passive observers in our relation to Being. As Heidegger writes, “Wherever man opens his eyes and ears, unlocks his heart, and gives himself over to meditating and striving, shaping and working, entreating and thanking, he finds himself everywhere already brought into the unconcealed.”¹⁹ Enframing conceals the truth of Being, blocking us from serving our purpose, but if our purpose is merely to serve, to be thankful for having been “brought into the unconcealed,” then it appears the “illusion” of freedom presented to us by Enframing might in the end be preferable to the reality Heidegger hopes we can recover. Indeed even when Heidegger explicitly discusses freedom, he still manages to make freedom seem somehow passive and unappealing, as for example when he writes, “Man is only an *administrator* of freedom, i.e., he can only let-be the freedom which is accorded to him, in such a way that, through man, the whole contingency of freedom becomes visible.”²⁰

Though Heidegger is often described as an *existential* phenomenologist, he is clearly opposed to the idea of freedom that has come to be associated with Existentialism. Heidegger himself states this opposition in his “Letter on ‘Humanism’” where he explicitly distances himself from Sartre, and in particular from Sartre’s “basic tenet” that “Existence precedes essence,”²¹ the tenet that defines humanity as essentially having no essence, as essentially free, free to define our essence for ourselves. Contrary to this idea, Heidegger writes:

The human being is rather “thrown” by being itself into the truth of being, so that ek-sisting in this fashion he might guard the truth of being, in order that beings might appear in the light of being as the beings they are. Human beings do not decide whether and how beings appear, whether and how God and the gods or history and nature come forward into the clearing of being, come to presence and depart. The advent of beings lies in the destiny of being. But for humans it is ever a question of finding what is fitting in their essence that corresponds to such destiny; for in accord with this destiny the human being as ek-sisting has to guard the truth of being. The human being is the shepherd of being.²²

To be human is to find oneself in a particular historical period, a historical period determined not by humans but by Being, by the Being that

gives us our destiny, a destiny of guarding and shepherding Being. Yet as guards and shepherds of Being we still play no role in shaping Being, no role in deciding how Being or beings or even history appears or disappears. Again, if technology serves to block us from realizing that this is our destiny and presents us instead with the illusion of freedom, it is perhaps no wonder that we have so embraced technology.

Heidegger is not blind to this issue though, as he himself raises in his “Letter” the concern that if we are enslaved by technology, if we are alienated by technology, then surely we need to respond with ethics rather than with ontology, with a focus on humanity rather than with a focus on Being. Heidegger writes:

The desire for an ethics presses ever more ardently for fulfillment as the obvious no less than the hidden perplexity of human beings soars to immeasurable heights. The greatest care must be fostered upon the ethical bond at a time when technological human beings, delivered over to mass society, can attain reliable constancy only by gathering and ordering all their plans and activities in a way that corresponds to technology.

Yet Heidegger continues:

Who can disregard our predicament? Should we not safeguard and secure the existing bonds even if they hold human beings together ever so tenuously and merely for the present? Certainly. But does this need ever release thought from the task of thinking what still remains principally to be thought and, as being, prior to all beings, is their guarantor and their truth? Even further, can thinking refuse to think being after the latter has lain hidden so long in oblivion but at the same time has made itself known in the present moment of world history by the uprooting of all beings?²³

Heidegger here moves from ethics back to ontology, trying to show that even when we are facing an ethical crisis like that presented by technology we should nevertheless remain focused on ontology. An ethical crisis does not automatically “release” us from our “task,” the task we cannot “refuse,” the task of ontology, of thinking about Being rather than merely thinking about human beings. Heidegger next moves however to merge ethics and ontology, arguing “that thinking which thinks the truth of being as the primordial element of the human being, as one

who eksists, is in itself originary ethics.”²⁴ But Heidegger ultimately concludes that this thinking is “neither ethics nor ontology,” as this thinking is “neither theoretical nor practical,” as it has “no result,” has “no effect,” but is simply “recollection of being and nothing else.”²⁵ In other words, our task is to be concerned with Being, not for any ethical or even ontological benefit but simply because that is our task, because that is what it means to be human.

We can now see that Heidegger is not particularly interested in technology, nor even in humanity, but only in Being. For this reason Heidegger only thinks about the relationship between technology and humanity from the perspective of Being, and from the perspective of what he perceives as humanity’s role in the destiny of Being. Yet, we must ask, does humanity have a destiny? Is there a destiny to which humanity belongs? For Heidegger, such questioning is the *piety of thinking*, such questioning sets us on our way to Being. For Nietzsche, such questioning is the *thinking of piety*, such questioning sets us on our way to nihilism. In *The Will to Power*—in a note which begins with the declaration, “*Against determinism and teleology*”²⁶—Nietzsche writes:

As soon as we imagine someone who is responsible for our being thus and thus, etc. (God, nature), and therefore attribute to him the intention that we should exist and be happy or wretched, we corrupt for ourselves the *innocence of becoming*. We then have someone who wants to achieve something through us and with us.²⁷

In other words, to focus as Heidegger does on Being rather than on becoming, on the destiny of humanity rather than on the humanity operating behind the concept of “destiny,” is to commit the mistake of not having “ceased to look for the origin of evil *behind* the world,”²⁸ a mistake that Nietzsche tells us in the *Genealogy* that he “learned early” to avoid. Though Nietzsche is arguing against “theological prejudice,” against the thinking that leads us to look *above* or *behind* the world for answers to our questions, we could apply this argument to what we could call Heidegger’s “ontological prejudice” by arguing that we should not look *below* or *within* the world either, as we must instead be willing to look at ourselves.

The irony here is that Heidegger questions not only the essence of technology but also “the essence of nihilism,”²⁹ two questionings that so

well parallel each other that one could seemingly replace “Enframing” with “will to power” in order to reveal that the two lectures—lectures that Heidegger gave only six years apart from each other—are two sides of the same argument. Yet it is precisely their similarity that is the problem for, even in his analyses of Nietzsche and nihilism, Heidegger still turns nihilism into a “historical movement,” a “fundamental ongoing event that is scarcely recognized in the destining of the Western peoples,” and “the world-historical movement of the peoples of the earth who have been drawn into the power realm of the modern age.”³⁰ Heidegger thus turns Nietzsche into a Heideggerian, into a thinker of Being rather than of becoming.

If therefore we disagree with Heidegger and side with Nietzsche, then we can disagree with Heidegger that humanity has a destiny that requires the thinking of Being and instead agree with Nietzsche that humanity has not a destiny but a prejudice toward “destiny” thinking, a prejudice that requires that we investigate *becoming*. We can still retain Heidegger’s insights into what technology means for human experience, insights into the ways that technology reveals and conceals the world, but we can do so without having to retain the deterministic conclusions that Heidegger draws from these insights. And such a Nietzschean³¹ reappropriation of Heidegger is precisely what we find in the philosophy of technology of Don Ihde, the philosophy that he has named *postphenomenology*.

3.3 IHDE AND TECHNOLOGIES

Postphenomenology is centered on what Ihde calls “human-technology relations.”³² These relations are not meant to be taken as merely how humans and technologies relate to each other, as the latest version of subject/object dualism, but rather as how, through these relations, humans and technologies become what they are. Postphenomenological investigations are therefore investigations into co-constitution,³³ into how technological beings, in a technological world, come to have meaning in, and through, and for each other.

Devices are not inert tools that I can pick up, use, and discard, for in picking up, using, and even in discarding a device I must already have a meaningful relationship with the device such that I can recognize it,

manipulate it, and become bored with it. The device must already have a place in my world and must already have the ability to shape, or *mediate*,³⁴ my experience of the world in order for me to even know that it is a device.

A fork is not merely a metal stick at the end of which are three smaller metal sticks, it is an ability to eat, a way to transform a plate of food into a meal, into a dish of mouth-sized bits of nourishment to be taken up as needed or desired. A fork may start out, perhaps when first seen in one's infancy, as metal to be played with, thrown, stabbed, or drummed, but it quickly becomes so tied to hunger that these once-infantile fork games are only later reverted to as a way of sublimating our frustration for not eating when expected, games we later play with the fork almost as if we see the fork as itself being as frustrated as we are.

To say that a fork is "frustrated" may sound like an appeal to *animism*—suggesting that objects can be alive even if inanimate—or an appeal to *projection*—suggesting that objects are receptacles of whatever desires, feelings, emotions their human users imbue them with. Yet in either case we are returned to the very subject/object dualism that postphenomenology is meant to transcend. In animism a fork can be seen as a subject modeled after human subjectivity, while in projection a fork can be seen as an object that a human subject can manipulate psychologically just as a subject would manipulate an object physically. Rather, what must be seen is that, for the child relating to the fork as a participant in a game or for the adult relating to the fork as a participant in a meal, there is no fork independent of the specific human-technology relation in which it is engaged, just as there is no child or adult independent of that same engaged relation.

As Wittgenstein tried to reveal in his *Philosophical Investigations*, we are easily tricked by language into holding certain philosophical positions, even if we do not realize it. Thus the name "fork" appears to suggest to us an object in the world that is predefined, predetermined, and whose determinate definition is maintained across any and all possible uses we might find for it. In other words, a fork forks, and a fork forks regardless of whatever particular forking we might be trying to engage in at any given moment. From this perspective, to stab someone with a fork is to misuse a fork for which reason we can, and often do,

scold others for using forks wrongly, for using a fork in a way that does not correspond to its proper use.

However, from the postphenomenological perspective, to stab someone with a fork is to relate to a fork as a participant in a murder plot. To see a fork as a way to murder someone is to not only constitute the fork as a potential weapon but, vitally, is to constitute myself simultaneously as a potential murderer. The intentional relation of $I \rightarrow \text{Fork} \rightarrow \text{Murder}$ co-constitutes myself as Murderer and the fork as Weapon such that, within the relation, there is no “fork” outside of its weaponness and there is no “me” outside of my murderousness. Unlike the aforementioned deterministic perspective, for the postphenomenologist, here it is not the case that a fork can be seen as a weapon but rather that a weapon can be seen as a “fork,” just as it is not the case that a person can be seen as a murderer but rather that a murderer can be seen as a “person.” In other words, there is no fork, there is no me, there is only the intentional relation.

Through postphenomenology we have arrived at an ontology based not on subjects and objects but on intentional relations, an ontology that is perhaps the truest realization of Husserl’s lifelong attempt to make phenomenology a presuppositionless science of intentionality. Such an ontology is centered not on Descartes’s “I think, therefore I am,” or even on “I intend, therefore I am,” but rather the more radical claim: “Intentional beings intend, therefore intentional beings are.” To return to the aforementioned fork example, we can now say that, in the $I \rightarrow \text{Fork} \rightarrow \text{Murder}$ relation, there is the intentional being “I” and the intentional being “Fork,” but it is only through the relation “ $\rightarrow \text{Murder}$ ” that “I” and “Fork” exist, and exist, more specifically, as “Murderer” and “Weapon” respectively. In other words, to say “I am a murderer” is to say “I, as the being who has an intentional relation with a being intended to be a weapon and a being intended to be a victim, am a murderer.”

Contrary to the fears of Heidegger, postphenomenology does not see our relationship with technology as dystopic or deterministic, precisely because of this co-constitutive nature of the human-technology relationship. Postphenomenologists refer to the “multistability”³⁵ of technologies to point out—as was shown earlier with the fork example—that because technologies have no inherent being outside of intentional relations, there can be nothing inherently fearful or determining

about technologies. Like the “duck-rabbit” optical illusion, technologies have no stable essence but only various *stabilities*, or various ways of being related to, none of which can be said to be “true” or “false,” “right” or “wrong.” This does not guarantee that human-technology relations must be instrumental or beneficial either but instead simply refutes any argument based on making *a priori* claims about how users *will* relate to technologies or, *contra* Heidegger, any claim about what technology *is*.

And yet this relational view of technologies does not originate with Ihde; it comes from Heidegger, from the Heidegger of *Being and Time*, from the “positive”³⁶ Heidegger who Ihde appropriates in order to challenge the “negative” views of the Heidegger of “The Question Concerning Technology.” Whereas in the later work Heidegger focuses on the distinction between ancient technology and modern technology in order to illuminate the difference between bringing-forth and challenging-forth, in the earlier work Heidegger focuses on the distinction between functioning technologies and malfunctioning technologies in order to illuminate the difference between “Being-in-the-world”³⁷ and subject/object dualism. Though in both works Heidegger’s primary focus is on Being, and the need for humanity to take up our proper role in relation to Being, nevertheless in *Being and Time* Heidegger explores the uses of *specific* technologies in *specific* contexts without making pronouncements about how the particular historical period we live in must determine our relationship to *any* technology in *any* context.³⁸

The most famous example of such an exploration is Heidegger’s discussion of using a hammer.³⁹ When hammering, according to Heidegger, we have a more “primordial” relationship to the world, as we do not pay attention to the hammer but simply use it. In hammering, the hammer is not a hammer but is an “in-order-to,” that which we use to do our work, the work that we are paying attention to instead, the work that is the “toward-this” of the hammering. Heidegger’s primary insight here—the insight from which Ihde develops his philosophy of technology—is that for the hammer to function as an “in-order-to,” in hammering, the hammer must “withdraw”⁴⁰ from our attention so that we can do our work, so that the “toward-this” of our work can occupy our attention instead.

This insight helps to explain why we so frequently hit our thumbs when hammering since, in hammering, neither the hammer nor even

our own bodies are the focus of our concern. Yet when we do hit our thumbs, when we do use the hammer and something unexpected occurs, our attention is suddenly taken away from our work and put instead solely on the hammer, which we then see no longer as an “in-order-to” but only as a hammer. Or, to be more precise, what we see in such a breakdown situation is not the hammer but the *in-order-to-ness* of the hammer. As Heidegger writes:

But *when an assignment has been disturbed*—when something is unusable for some purpose—then the assignment becomes explicit. Even now, of course, it has not become explicit as an ontological structure; but it has become explicit ontically for the circumspection which comes up against the damaging of the tool. When an assignment to some particular “towards-this” has been thus circumspectively aroused, we catch sight of the “towards-this” itself, and along with it everything connected with the work—the whole “workshop”—as that wherein concern always dwells. The context of equipment is lit up, not as something never seen before, but as a totality constantly sighted beforehand in circumspection. With this totality, however, the world announces itself.⁴¹

Not unlike the law of conservation of energy, Heidegger argues that humans have something like a law of conservation of attention, that we can be concerned with work or we can be concerned with the world but not with both simultaneously. The world, as a referential totality, as a totality of every “in-order-to” and “towards-this,” only “announces itself” when our work has been “disturbed,” when we are taken out of our practical mode of working and are instead led to take up a more theoretical mode, following the suddenly apparent chain of references in order to figure out what went wrong.

Rather than follow Heidegger—moving from the ontic to the ontological, from the everydayness of hammering to the meaning of Being—Ihde remains within the ontic, establishing postphenomenology as a research program into the human-technology relations of everyday life, a research program meant to steer clear of the “negative” conclusions of Heidegger’s ontology. Ihde thus turns Heidegger’s analysis of hammering into an exemplar of how to carry out analyses of human-technology relations, analyses which lead Ihde to expand the field of human-technology relations beyond Heidegger’s examples, resulting in analyses

into four types of relations: “embodiment relations,”⁴² “hermeneutic relations,”⁴³ “alterity relations,”⁴⁴ and “background relations.”⁴⁵

Embodiment relations occur when a technology functions for a user like a body part, expanding and extending the physical abilities of users, such that the user experiences empowerment without experiencing the technology that is enabling the empowering. The classic example of an embodiment relation—other than Heidegger’s hammer example—is wearing a pair of glasses, as glasses enhance eyesight while disappearing from view. The better the glasses, the less likely it is that the glasses wearer will take notice of them, for which reason we say, “I see you,” rather than, “My glasses and I see you.” We do not mention the glasses in everyday conversation because the “I” has come to include the glasses. To make this relationship more clear, Ihde formalizes such embodiment relations as:

$$(I\text{-Technology}) \rightarrow \text{World}^{46}$$

We perceive the world through embodiment technologies, but this perception is achieved, as Heidegger described, by such technologies withdrawing from concern so that we can be concerned instead with the world that these technologies help to reveal. While such technologies can easily be listed—such as binoculars, ear buds, microphones, hammers, and shoes—because of the multistable nature of technologies it is important to recognize that we can potentially experience embodiment relations with almost any technology, like when we use a book as a hammer or when we use a smartphone to move something just out of reach. The specific technology is not therefore what defines an embodiment relation but rather the specific technology’s dynamic of revealing and withdrawing in the form of the *amplification* of our perception and the *reduction* of our awareness of the technology mediating our perception.⁴⁷

Hermeneutic relations occur when a technology functions for a user like a translator, expanding and extending the interpretive abilities of users, such that the user feels informed without thinking about the technology that is enabling the informing. An example of a hermeneutic relation is reading a book, as a book conveys information while the lines that make up the letters and the letters that make up the words and the words that make up the sentences are all absorbed into the experience

of reading. Again, the better the book, the less likely it is that the reader will take notice of the lines, words, and sentences, for which reason we say, “I read a story,” rather than, “I read a collection of various lines that combine to form a story.” Ihde formalizes hermeneutic relations as:

$$I \rightarrow (\text{Technology-World})^{48}$$

The world that we learn about through hermeneutic technologies is a world that we only have access to through hermeneutic technologies, technologies that merge with the world we are attempting to learn about such that the technology and the world become indistinguishable. Again, thanks to multistability, what is important here is not the particular technology involved in a hermeneutic relation—whether it be an artifact, a map, a website, or an app—but rather the particular technology’s dynamic of revealing and withdrawing in the form of the *presence* of the world we are given access to and the *absence* of our awareness of the technology mediating that access.⁴⁹

Alterity relations occur when a technology functions for a user like an *other*, like a person or animal, acting independently of the user, expanding and extending the interactive abilities of users, such that the users experience the presence of a seemingly autonomous being without thinking about the technology that is enabling the semblance of autonomy. An example of an alterity relation is playing a game against a computer, as the computer opponent challenges us and entertains us, leading us to feel inferior to the computer when we lose and to feel superior to the computer when we win, as if the computer opponent could likewise feel inferiority or superiority toward us. Once more, the better the game, the less likely it is that the user will take notice of the programming operating behind the computer opponent, for which reason we say, “I beat the computer,” rather than, “I beat the programming that determined the moves made by the computer.” Ihde formalizes alterity relations as:

$$I \rightarrow \text{Technology-}(-\text{World})^{50}$$

Unlike embodiment and hermeneutic relations, alterity relations focus our attention on technologies rather than on the world. Yet with the disappearance of the world from our concern so too does the nature of the specific technology disappear, leaving us feeling that we are in the

presence of a living being rather than a technology created by living beings to simulate the behavior of living beings. Multistability plays a role here too, such that the particular technology—whether a toy, a robot, a game, or a Siri—is less important than the particular technology’s dynamic of revealing and withdrawing in the form of *fascination* with the liveliness of the technology and *obliviousness* with regard to the world.⁵¹

Background relations occur when a technology functions for a user like a part of the environment, operating unnoticed, expanding and extending the attentive abilities of users such that users can pay attention to the world without having to pay attention to the technologies working behind the scenes to enable the user’s attentiveness. An example of a background relation is a refrigerator, as the refrigerator keeps food edible for us, through a process that we need not understand and that we likely would prefer not to think about. Hence the better the refrigerator, the less likely it is that we will think about the refrigerator, for which reason we say, “This food is good,” rather than, “This food, which was kept fresh in the refrigerator, is good.” Ihde does not formalize background relations, however we could imagine that if he had, it would look something like the following:

I → World-(-Technology)

Background relations are thus the reverse of alterity relations, as our attention is focused on the world rather than on technologies even though, as with alterity relations, our attention’s focus is due to the automaticity of the technology, to the ability of the technology to function without our involvement. Yet the technologies that fade out of our awareness are still a vital part of our world, hence the world that we focus on in background relations is an incomplete world, a world where things work but in a taken-for-granted way. It is for this reason that multistability operates even in background relations, making the particular technology—such as lighting, heating, plumbing, electricity, or Wi-Fi—less important than the particular technology’s dynamic of revealing and withdrawing in the form of the *absent presence* of the technology and the *present absence* of the world.⁵²

Following Heidegger, Ihde not only focuses on the dynamics of revealing and withdrawing at work in human-technology relations in opti-

mal situations but also focuses on how such dynamics work in suboptimal, or “breakdown,”⁵³ situations. Embodiment technologies have the ability to *empower* us, but they also have the ability to *belittle* us, revealing when they break how dependent on technologies we have become. Hermeneutic technologies have the ability to *enlighten* us, but they also have the ability to *betray* us, revealing when they misinform us how much faith we put into technologies. Alterity technologies have the ability to *entertain* us, but they also have the ability to *enrage* us, revealing when they impede us how much emotional investment we have put into technologies. Background technologies have the ability to *enliven* us, but they also have the ability to *incapacitate* us, revealing when they malfunction how reliant on technologies we have become.

For Ihde, these breakdown situations show that whereas Heidegger was right that we do not have a merely instrumental relationship with technologies, Heidegger was wrong that we have a merely deterministic relationship with technologies. Ihde writes:

In extending bodily capacities, the technology also transforms them. In that sense, all technologies in use are non-neutral. They change the basic situation, however subtly, however minimally; but this is the other side of the desire. The desire is simultaneously a desire for a change in situation—to inhabit the earth, or even to go beyond the earth—while sometimes inconsistently and secretly wishing that this movement could be without the mediation of the technology. [. . .] In the wish there remains the contradiction: the user both wants and does not want the technology. The user wants what the technology gives but does not want the limits, the transformations that a technologically extended body implies. There is a fundamental ambivalence toward the very human creation of our own earthly tools.⁵⁴

Technologies mediate our experience of the world, and mediate our experience of ourselves. That this mediation occurs in a “non-neutral” way does not mean that technologies *determine* our experiences but rather that technologies *give us exactly what we want*, fulfilling our “desire for a change in situation.” The problem, according to Ihde, is that, while we want the situational changes that technologies provide, we do not necessarily want technologies to have to provide these changes for us.

3.4 NIETZSCHE AND NIHILISM-TECHNOLOGY RELATIONS

Technologies reveal who we are and, most importantly, technologies reveal that we have a “fundamental ambivalence” toward technologies, simultaneously wanting and not wanting technologies in our lives. We know we want what technologies do; we also know we do not want technologies to do what they do, at least insofar as technologies reveal that we want and often *need* technologies to do what we are incapable of doing on our own. Rather than the Heideggerian concern that we are enslaved to technologies, Ihde points toward a much greater concern, the concern that we are not blindly delivered over to technologies but are well aware of what technologies do, what technologies do to us, for us, and with us, yet we continue to use technologies nevertheless. And it is this *nevertheless* that we must investigate.

If we focus less on Being and more on Capitalism, we can see how we have come to be aware of technologies in ways that Heidegger did not think possible. Technologies have not only become increasingly prevalent in our everyday lives, they have also become increasingly likely to break, to misinform, to impede, to malfunction during their everyday use. Whereas in Heidegger’s day it may have been a rare occurrence for a hammer to break, and thus a rare occurrence for someone to experience in such a breakdown situation the role that a hammer plays in our experience, today it is in no way a surprise for a hammer, or for any technology, to break. Thanks to the drive to maximize profits by minimizing the costs of production, mass production and cheap materials have combined to surround us with technologies that are made not to last but to be replaced, providing us ample opportunities to discover the roles that technologies play in our everyday lives.

It is here that we can begin to see the role that nihilism can play in human-technology relations. We continue to use technologies that have the ever-present possibility to belittle us, to betray us, to enrage us, and to incapacitate us, and yet this continued use is done not blindly but willingly. Or, to be more precise, we willingly make ourselves blind to these possibilities by taking them for granted, by treating them as just the price we must pay in order to be empowered, enlightened, entertained, and enlivened. Technologies have not, as Heidegger predicted,

led us to feel like we are masters of the universe but rather something closer to middle management. We are forever in negotiations with our technologies, treating them as partners in a bad relationship, trying to make ourselves comfortable with the idea that even though technologies are not always good for us, we just cannot seem to live without them. So we settle for what we have, we enjoy the good and try to ignore the bad, while we wait for a newer, younger model to come along to hopefully provide what we are missing.

In this way, through our ambivalence toward technologies, we continue to come closer and closer to Heidegger's determinism. We relate to technologies *as if* they were our destiny, *as if* we were blind to their effects on us, *as if* we had no freedom to change our situation. By bringing Nietzsche and Ihde together to investigate this way of relating to technologies, we can discover a new type of human-technology relation, a type of relation I call *nihilism relations*. Nihilism relations can be formalized as:

Technology \rightarrow World-(-I)

Whereas in alterity relations the world fades from our concern, and in background relations the technology fades from our concern, in nihilism relations the I fades from our concern. To put it another way, in nihilism relations, it is our concern that fades from our concern, which is what takes place whenever we use technologies while trying to conceal from ourselves the dangers of using technologies, for which reason we say, "I can't believe I spent all day on my computer," rather than, "I can't believe I am not taking responsibility for having spent all day on my computer."

As with the human-technology relations Ihde identified, here too multistability is operative, making the particular technology involved in a nihilism relation less important than the particular technology's dynamic of revealing and withdrawing. However, this dynamic can take several forms, as Nietzsche already indicated in his investigations into what I have called *human-nihilism relations*. In order to investigate our ambivalence toward technologies, we must bring together the insights from Nietzsche's analyses of human-nihilism relations with the insights from Ihde's analyses of human-technology relations and begin a new research program into what I call *nihilism-technology relations*.

In the chapters that follow I will try to show how this research could be carried out, and to make clear why this research *should* be carried out, by providing case studies of various technologies. These case studies will explore not only how technologies in our everyday lives are already being used nihilistically but also how using technologies nihilistically can be dangerous. Yet in the end these dangers will lead us in the final chapter not toward a Heideggerian pessimism, not toward a deterministic view of the destiny of Being, but rather toward a Nietzschean optimism, an optimism focused on moving from the understanding of what it means to be human that arises from reckoning with *the death of God* to forging a new understanding of what it means to be human from reckoning with *the death of Google*.

NOTES

1. Martin Heidegger, "The Question Concerning Technology," in *The Question Concerning Technology and Other Essays*, trans. William Lovitt (New York: Harper & Row, 1977), 3.
2. Heidegger, "Question," 4.
3. Heidegger, "Question," 5.
4. Heidegger, "Question," 12.
5. Heidegger, "Question," 13.
6. Heidegger, "Question," 14.
7. Heidegger, "Question," 15.
8. Heidegger, "Question," 17.
9. Heidegger, "Question," 19.
10. Heidegger, "Question," 18.
11. Heidegger, "Question," 28.
12. Heidegger, "Question," 24.
13. Heidegger, "Question," 35.
14. Heidegger, "Question," 7.
15. Heidegger, "Question," 8.
16. J. A. Symonds, "Twenty-three Sonnets from Michael Angelo," *The Contemporary Review* 20 (1872): 513.
17. Heidegger, "Question," 18.
18. For more on this thematic continuity in Heidegger see for example Raffoul's discussion of Heidegger in François Raffoul, *The Origins of Responsibility* (Bloomington and Indianapolis: Indiana University Press, 2010). As Raffoul points out, to make this theme more clear in his work, "after *Being and*

Time, Dasein will be referred to more and more as ‘the called one’ (*der Gerufene*), having to answer for the very openness and givenness of being and be its ‘guardian’” (Raffoul, *Origins of Responsibility*, 244).

19. Heidegger, “Question,” 18–19.

20. Martin Heidegger, *The Essence of Human Freedom*, trans. Ted Sadler (London and New York: Continuum, 2002), 94.

21. Martin Heidegger, “Letter on ‘Humanism’,” in *Pathmarks*, ed. William McNeill, trans. Frank A. Capuzzi (Cambridge: Cambridge University Press, 1998), 250.

22. Heidegger, “Letter,” 252.

23. Heidegger, “Letter,” 268.

24. Heidegger, “Letter,” 271.

25. Heidegger, “Letter,” 272.

26. Nietzsche, *Will to Power*, 297.

27. Nietzsche, *Will to Power*, 299. See also Nietzsche, *Will to Power*, 59–60, where Nietzsche criticizes Schopenhauer for having succumbed to the “nineteenth century” search “for theories that seem to justify its fatalistic submission to matters of fact,” for “determinism,” and for “the denial of will as an ‘efficient cause’.”

28. Nietzsche, *Genealogy*, 17.

29. Martin Heidegger, “The Word of Nietzsche: ‘God is Dead,’” in *The Question Concerning Technology and Other Essays*, trans. William Lovitt (New York: Harper & Row, 1977), 53–112.

30. Heidegger, “Question,” 62–63.

31. Don Ihde, *Technology and the Lifeworld* (Bloomington and Indianapolis: Indiana University Press, 1990), 224.

32. Ihde, *Technology and the Lifeworld*, 21.

33. Peter-Paul Verbeek, *What Things Do*, trans. Robert P. Crease (University Park: Pennsylvania State University Press, 2005), 129–30.

34. Ihde, *Technology and the Lifeworld*, 44–46.

35. Ihde, *Technology and the Lifeworld*, 144.

36. Don Ihde, *Technics and Praxis* (Dordrecht: D. Reidel, 1979), 125.

37. Martin Heidegger, *Being and Time*, trans. John Macquarrie and Edward Robinson (New York: Harper & Row, 1962), 78.

38. On this distinction between Heidegger’s earlier and later works see also Verbeek, *What Things Do*, 80.

39. Heidegger, *Being and Time*, 98.

40. Heidegger, *Being and Time*, 99.

41. Heidegger, *Being and Time*, 105.

42. Ihde, *Technology and the Lifeworld*, 72.

43. Ihde, *Technology and the Lifeworld*, 80.