

Kontroverse



Regina Silveira: *Abyssal* (2010). Adhesive vinyl, painted walls and light filters. Atlas Sztuki, Łódź, Polónia.

What is postphenomenological philosophy of technology?

A debate between Don Ihde and Andreas Kaminski in six letters

The editors of the yearbook had invited Don Ihde to discuss with me the relationship between phenomenology and postphenomenology of technology. Don Ihde developed postphenomenology from his intensive engagement with classical phenomenology. Postphenomenology has attracted much international attention in recent years, as publications and conferences show. In German-speaking countries, the resonance seems to be intensifying at present, too. Don Ihde and I agreed that we would discuss the relationship between phenomenology and postphenomenology in six letters. At the center of the controversy the question should be whether postphenomenology represents a fundamental renewal or whether it is not rather an accentuation within classical phenomenology. In the first letter, Don Ihde presents postphenomenology and its historical development, while I problematize the distance to phenomenology in order to localize the demarcation line. Right at the beginning of this letter, Don Ihde points out that phenomenology itself has different new beginnings, each of which sought to reverse Husserl's transcendental turn overall or in certain aspects. This is perfectly true, however, it leaves open the question to which extent postphenomenology has moved away from classical phenomenology. Letters three and four deepen this discussion and we examine how solid our arguments are. Letters five and six then address another aspect: the role of the political and ethical in postphenomenology.

Parallel to our letters, a lively and unplanned email exchange evolved. There, we addressed the relationship between (post-)phenomenology and pragmatism; this discussion, however, has developed into a debate about the different modes of reception in Europe and the USA. Although the exchange of emails does not contain significant theoretical considerations in my opinion, it showed us why the controversy we carry out in these letters is significant: it enables us to grasp the experience of a different history of phenomenology.

Andreas Kaminski

Letter 1:

Dear Andreas Kaminski:

I shall call this first letter **Naming Postphenomenology**. Naming frequently follows earlier other-named times, as for example, »scientist« followed centuries of »natural philosophy.« Phenomenology has itself had a history of variations—*existential*, *hermeneutic*, and now *postphenomenology*. All these variations reject aspects of Husserl's egological transcendental version of classical phenomenology. I shall focus upon the origins and motivations for »postphenomenology«, first with my use of the name, *Postphenomenology: Essays in the Postmodern Context* (NWU Press, 1993) although praxical elements far precede that date. Those familiar with postphenomenology know that it is a deliberate modification of versions of classical phenomenology which reject Husserl's egological transcendental (and all quasi-Cartesian leftover aspects), incorporate some aspects of American Pragmatism, and rely upon an interrelational ontology still modeled upon »intentionality.«

First, anticipations in publications: As early as my second book, *Sense and Significance* (Duquesne University Press, 1973), already back then I recognize that two predominate new philosophies of experience are phenomenology and American pragmatism, and that both are attacks upon early modern epistemology (see *Sense and Significance*, pp 13–14). But far more telling was my best-selling book, *Experimental Phenomenology* (Capricorn Books, 1977; SUNY Press, 1986, 2nd Edition, 2012). (I note in passing that Capricorn was the branch of G.P. Putnam's, which was Dewey's main publisher mid-20th century). In *Experimental Phenomenology*, I set out to do what amounted to a classical phenomenological deconstruction of what were popularly called »ambiguous drawings« which I re-named »multistable drawings.« My approach was both Husserlian, following his call to »do« or perform phenomenology, and Merleau-Ponty's more subtle and more variable version of phenomenology. I soon recognized that by following what I took to be classical phenomenological analyses, I was coming up with something quite radically different. Instead of finding »essences,« I was finding »multistabilities.« At that time, I did not realize that what I took to be phenomenology-in-practice, was reaching an *anti-essential result*. The year, 1977, was before the Rortyan massive attack upon both foundationalism and essentialism in his 1979 *Philosophy and the Mirror of Nature* (1979) and the follow-up, *Consequences of Pragmatism* (1982).

My case studies, multistable drawings (such as the Necker Cube), were known to have two three-dimensional perceived variations, with a few commentators recognizing—when a subject was tired—a possible third, two-dimensional variant. I showed for all standard variants of drawn Necker Cubes that at least five perceived variants were easily possible by adding two totally different three dimensional variants (see *Experimental Phenomenology*, chapters 5 & 6). I later showed, for example, with the circle and a squiggle line through it, that up to 9 variations were possible. In short, I was the first phenomenologist to radically break the 2–3 variation barrier for visual multiplicity, substituting multistability for essences. Since then, many sciences have discovered the same phenomenon, for example in two atom-thick films with certain chemicals, 9 to 13 self-organizing forms were found. And in astronomy with today's trillion or more galaxies, there are 13 recognizable shapes (note, until Hubble recognized Andromeda as a second galaxy, with his new 100-inch telescope and until his 1924 *New York Times* publication there was, for science, only one galaxy, the Milky Way. Our celestial world today has drastically changed from early modernity.)

Early critiques of my discovery of multistabilities argued that drawings were too abstract and thus superficial. Soon, however, I realized that very complex cultural praxes were also multistable and my 1990 *Technology and the Lifeworld* showed how radically different modes of long-range navigation—European and South Pacific—were all anti-essentialist and multistable (the same applies for the later history of technology examples in the second, expanded edition of *Experimental Phenomenology; Multistabilities* (2012)).

By 1979, my phenomenological interests had turned to technologies and *Technics and Praxis* today is widely accepted as the first English language book in the philosophy of technology. I—later regretting my earlier decision—dedicated the book to Heidegger and had accepted his notion of the primacy of technology over science, which I had translated into »no instruments (technologies), no science«. In addition, today I expand that to many other human praxes, such as art, »no tools (technologies), no art.« As noted, discoveries in science relate to the *mediations* made possible by instruments. But instruments are *material entities* and early modern science, I would argue, was made possible largely by optical technologies (Galileo, not only physicist, but also lensmaker, used both telescopes and microscopes to make his most original discoveries, which at the theoretical level helped him switch from Ptolemaic to Copernican views of the Solar System.)

I will add here a brief summary of the more self-aware history of »postphenomenology«:

In 1984, while on a sabbatical in Europe, I, having followed the massive discussion and attack upon all »foundationalism« by Richard Rorty, was invited by Ferenc Martan in Goteborg, Sweden, to give lectures on this discussion—I did and gave the published version the title *On non-foundational Phenomenology* (Goteborgs, 1986). This publication was my explicit reply to Rorty, accepting an anti-essentialist, non-foundational interpretation of phenomenology. But realizing this title was too clumsy I later did *Postphenomenology: Essays in the Postmodern Context* (NWU, 1993), a terminology which sticks to this day. Finally, from 1998 to retirement in 2012, I directed the Technoscience Research Group, which also had a seminar that fulfilled Stony Brook University’s philosophy interface [interdisciplinary] seminar requirement. As part of our purpose we read in the areas of philosophy of science, philosophy of technology, science studies, restricted to all contemporary authors (with occasional exceptions such as Heidegger, Kuhn, and other »founders« in our relevant fields.) And as part of our training, we encouraged participation in the major conferences in our fields. Drawing many Visiting Scholars from Asia, Europe, and Latin America, we soon—by 2007—were mounting »postphenomenology research panels« at 4/S, SPT, SPHS conferences, a practice which continues today. We also invited, for a »roast« many contemporary figures in our chosen fields and had virtually all the major philosophers of technology and science, feminist and science studies figures (15 over the years) as »roastees«. These, in turn often were dealt with in the many doctorates which came out of the research program.

Finally, I will turn to the core shift which spans from my turn to a »phenomenology of technics« which already took initial shape in *Technics and Praxis* (1979) and was expanded and refined in *Technology and the Lifeworld* (1990, and subsequently reprinted in virtually all English language philosophy of technology anthologies, 6–7 books). I moved from Southern Illinois University to Stony Brook University in 1969 and by the early 70’s had begun to do work on technologies. I applied an inter-relational analysis modelled upon »intentionality,« first in its Husserlian, later modified by Heideggerian and Merleau-Pontean notions of »being in the world (more existential and hermeneutic).« None, with some Heideggerian exceptions, did much with concrete technologies, and to my mind, worse, with Husserl, too often deeply embedded in an abstract, idealist tinged tone, and thus my phenomenological technics from the beginning was sensitive to what I call *materiality*. Beginning with Heidegger’s famous priority of technology over science and his »tool analysis« in *Being and Time* (1927), but aiming at a more complete and diverse set of human-technology relations, I re-termed a first set, *embodiment relations*. These were human-world relations which I formalized as (I-technology) → world relations, which drew from phenomenology’s deep understanding of the human actional-perceptual experience of being a bodied being. Far from a Cartesian notion of a mechanical bo-

dy in a subject-object context, we experience much of our world through technology mediations, examples of which include prostheses like eyeglasses, hearing aids, extended aids like Merleau-Ponty's blind man's cane, ladies feathered hats, or macro technologies like driving cars or running an excavator, all of which entail a close sense of *embodiment*. But each example is also unique and calls for learned bodily skills, and through which we learn to take the particularities of the technology's »materiality« into experienced concreteness. My own examples over time were many—musical instruments, computer game playing, long distance sensing, etc. *Hermeneutic Relations*, formalized as $I \rightarrow$ (technology-world) relations, a continuous but narrower set of experiences relate to our meaning or interpretive skills. Thus, while I do not bodily experience cold weather outside my warm house, by »reading« a thermometer, I can »interpret« the weather; or, I can relate more directly with certain technologies, toys and robots come to mind which I call $I \rightarrow$ technology (-world) relations, *Alterity Relations*. Add *Background Relations*, the range of taken-for-granted but sometimes peripherally experienced, as the heat and light of an indoor room, or the taken-for-granted environment outdoors. In each type of human-technology relation the first person, the phenomenologically described whole body experience, along with the selectivity or »materially sensitive« difference of the technological mediating process is accounted for. Interrelationally, we may invent and use technologies; but experientially, reflexively, technologies also »make us« co-constitutional.

Don Ihde

Letter 2:

Dear Don Ihde,

Thank you very much for accepting the invitation to discuss your postphenomenological philosophy of technology. It is a wonderful experience to engage with your works, which continue the lines of classical phenomenology and undertake to overcome its weaknesses.

In this context, your first letter is already helpful. For it gives us hints as to how you finally came from a critical examination of traditional phenomenology to the development of postphenomenology long before its name was coined.

In this letter, I would like to discuss with you the relationship between phenomenological and postphenomenological philosophy of technology. (So, from now on, I will be less interested in the connection to pragmatism, which is also important for the naming.) Right at the beginning, I want to formulate an objection in the form of a thesis. The function of the skeptical thesis is not to prove my opinion correct; rather, objections often help me to clarify thoughts. My thesis will be: Postphenomenology is at its core classical phenomenology. Contrary to what the prefix ›post‹ suggests, it remains within the scope of classical phenomenology and represents an *internal differentiation* of its ideas. Since I can only pick up a few thoughts of your work in this first short letter, I will deal with two topics which I think are central:

1. Technology and Intentionality
2. The Empirical Turn

1. Technology and Intentionality

My starting point is an astute idea, which I find in your reflections on technology. For Husserl, as you quite accurately point out, »all consciousness is consciousness of ›something.« This is the meaning of intentionality. Against Husserl you formulate the following objection: »I contend that the inclusion of technologies introduces something quite different into this relationality. Technologies can be the means by which ›consciousness itself‹ is mediated. Technologies may occupy the ›of‹ and not just be some object domain.« (*Postphenomenology and Technoscience*, p. 23)

This consideration is significant because it attempts to determine the role of technology at the center of phenomenology: in its relation to intentionality. I understand your consideration as follows: Technology is not simply an *object of* consciousness, but technology concerns the *way* in which objects appear for consciousness. Technology changes this way, in this sense technology *mediates*.¹

In my opinion, however, this thought represents the core of the classical phenomenological philosophy of technology, including *Husserl's*. About him, however, you write that technology is essentially »what is left out of the Husserlian analysis.« (*Post-phenomenology and Technoscience*, p. 30, cf. also p. 20)

So, let's start with Husserl. Here, I come to a different assessment. Firstly, I believe that Husserl has one of the most powerful philosophical concepts of technology. Secondly, technology is understood by Husserl in the same way as you suggest it in your quote above. Technology is not, or not primarily, the object of consciousness, but it rather changes the way we relate to objects.

Husserl formed his concept of technology in the context of his work on the *Crisis of European Sciences* (however, preliminary work goes back to the essays »Über Erneuerung« which appeared in a Japanese journal in the early 1920s, cf. *Husserliana* vol. 27). This concept of technology is first developed for the history of mathematics (the considerations about the role of idealization that you emphasize in *Technology and the Lifeworld* are developed in this context, but in my opinion, they are not limited to it).

Technology is a double easing for Husserl. The technical practice is a relief and decoupling from the knowledge of both the (1) context of origin and (2) context of justification. I would like to illustrate it with the following example: In order to use a mathematical theorem like Pythagoras', we do not need to know who Pythagoras was, under what circumstances he discovered it, nor do we need to know what its justification is. We just need to have the knowledge to apply it. The Pythagorean theorem can therefore be used technically. This is exactly what technology is for Husserl: It enables us to use its powers without knowing the conditions under which they were created or are justified. For this reason, Husserl can regard the history of mathematics as a history of its mechanization before and without the existence of calculators or computers (cf. § 9g in the *Crisis* in connection with Supplement III *The Origin of Geometry*).²

What is important in our context is that technology for Husserl is not consciousness of something, but the way in which objects appear to us. This also becomes clear in Husserl's analyses of the mechanization of science. Husserl's metaphor of the scientific *Ideenkleid* that we throw over the world points this out. The methodical idealizations represent technologies. They are no longer understood as technical mediations but are taken for the actual reality itself. The mechanization of mathematical idealizations favors this shift in meaning. Because of the decoupling of the context of origin and justification, the meaning of the methodical techniques is no longer understood in the original way.

Regarding Heidegger and Merleau-Ponty there is no dissent between us. Nevertheless, they confirm my thesis: Technology is primarily not an object for classical phenomenology, but a way of intentionality. This applies to the early as well as to the late Heidegger. In *Being and Time*, he describes the *practical* understanding of technology. Technology takes place in practice, in which, however, technique is *not an object* – if it works well (it is not present as long as it works). In *Question Concerning Technology*, a further consideration of Heidegger appears which can only be found in hints in *Being and Time*. Technology is now understood as the hermeneutic horizon in which we encounter and understand the world. In other words, technology is a world-and-self-relationship in which something is considered from the point of view of its possible usability. Technology therefore represents a technical perception and understanding of world and self that logically precedes technical artifacts. Thus, Heidegger defines technology as a way of *Entbergung*. The formulations Heidegger chooses are meaningful for this. He writes that in technology, »[t]he earth now reveals itself *as* a coal mining district, the soil *as* a mineral deposit« (*Question Concerning Technology*, p. 14, emphasis by me). In his essay, Heidegger uses this structure (x *as* y) numerous times: something is understood *as* useable, *as* a possible means. This »as« structure refers to *Being and Time*, where Heidegger distinguishes the apophantic from the hermeneutic »as« (*Being and Time*, p. 158). In a judgment, something is defined as something (apophantic »as«). The judgement is logically preceded by the interpretation in which the respective views and then taxonomies are formed (hermeneutical »as«). In this sense, technology is a hermeneutic horizon and therefore not an object, but the way in which objects appear to us.

Merleau-Ponty, on the other hand, considers intentionality in the context of embodiment. What the history of sedimentation of sense is for Husserl is for Merleau-Ponty the history of habitualization, in which technique is incorporated (as your discussion of Merleau-Ponty's feathered hat shows in *Technology and the Lifeworld*, p. 38 ff.). With the idea of an embodied habitualization, Merleau-Ponty repeats the thought that technology is not the object of the body, but the way in which objects are conveyed to us.

So, in all three beginnings of phenomenology we find the same thought: technology is not primarily the object of consciousness, but the way objects are mediated. For this reason, I have the impression that when it comes to the relationship between technology and intentionality, the distance between phenomenology and postphenomenology is minimal.

This doesn't change fundamentally by the relations you mention variously in your books and at the end of your letter: embodiment, hermeneutic, alterity, background relations and co-constitution. These technical mediations largely correspond to the considerations of classical phenomenology, as the references in your own account also show. The hermeneutic dimension of the technique is dealt with in detail by Husserl and Heidegger, the embodiment is described comprehensively by Merleau-Ponty. The background relations play an essential role for all of them (this raises a question, by the way: Are the relations different classes that are disjunct, or – as it seems more obvious to me – different modes and dimensions?). Co-constitution as the fifth form of relation plays an important role not only for Heidegger and Merleau-Ponty, but also for Husserl. The way in which subjects understand each other on the basis of mathematization and psychologization is owed to a co-constitution by the techniques, even if Husserl understands them as methodical misconceptions.

What is the difference between phenomenology and postphenomenology? Up to this point, I have the impression that this is an internal differentiation of different technical modes of intentionality within the classical framework.

2. The Empirical Turn

One of your criticisms of classical phenomenology is as follows: Despite the relatively great importance attached to technology in phenomenology compared with philosophy at the time, there are hardly any descriptions of specific technologies. Here, I agree with you. This is partly due to systematic reasons. For Husserl, Heidegger and Merleau-Ponty, technology is what is withdrawn from attention.

Whether in sedimentation, practical accessibility, hermeneutic pre-understanding or bodily habitualization, in all descriptions technique is what is not thematic. From this ridge all the techniques appear in the same way: as inconspicuous mediators.

In my opinion, the surplus of postphenomenology consists in the fact that it considers the respective *specific* way of technical mediation (analogous to media theories). Your investigations into the history of scientific visualizations (how does optics change perception, space, time) or acoustics are paradigmatic for this. Here, postphenomenology has opened up a wealth of fields of work for us.

However, for me the question is: Does your work provide us with procedures for carrying out these investigations? And are the procedures phenomenological or post-phenomenological? The idea of an empirical turn raises the question in which sense empiricism is to be understood (Husserl distinguished between *Anschaung* and *Er-fahrung*. In a certain sense, phenomenology was a science based on, of course, a different kind of experience for him³). What is clear is that you reject the eidetic variation and instead investigate multistabilities. However, I would ask: in what way? Here history (*Geschichte*) and stories (*Geschichten*) play a central role for you. You tell stories that guide the search for new *Gestalten*. And you reconstruct history, which, for example, reappraises the multistabilities of the bow. However, classical phenomenology was also increasingly on its way into history as Husserl's late works and most of Heidegger's and Merleau-Ponty's oeuvre demonstrate. In any case, it remains open to me which experience, and which empiricism is at stake.

Andreas Kaminski

Notes to letter 2:

¹ Intentionality was indeed the central discovery of early phenomenology. For classical phenomenologists, however, it is less the result than the starting point of their investigations. It was not clear to them what they had discovered when they encountered intentionality. Phenomenological research can be reconstructed as the great effort to understand this discovery which Husserl calls the »marvelous ownness, back to which all rational-theoretical and metaphysical enigmas lead« (*Ideas* I, p. 200 [168]). Accordingly, he points out: »The concept of intentionality, apprehended in its undetermined range, as we have apprehended it, is a wholly indispensable fundamental concept which is the starting point at the beginning of phenomenology. The universality which it designates may be ever so vague prior to more precise investigation; it may enter into an ever so great plurality of essentially different formations;

it may be ever so difficult to set forth in rigorous and clear analyses what makes up the pure essence of intentionality« (*Ideas I*, p. 202 [171]). Heidegger writes: »[I]t must be said that this enigmatic phenomenon of intentionality is far from having been adequately comprehended philosophically. Our inquiry will concentrate precisely on seeing this phenomenon more clearly.« (*Basic Problems of Phenomenology*, 1982 [1927] p. 58 [81]). For already in the question of *what* it is that is directed at something, there are differences between Husserl (consciousness), Heidegger (first existence, later being) and Merleau-Ponty (body).

² In my opinion, Husserl's concept of technology is extraordinarily powerful. (a) Technology in general can be understood in this way. A refrigerator as well as a car or a computer can be understood by means of this notion. (b) The social accumulation of knowledge can be explained as well as why individuals become increasingly ignorant in *relation to* the accumulated social knowledge: More and more knowledge can be ›hidden‹ in technology. Just think of the vast history of discoveries and inventions that makes a touch screen possible, from computer science to electrical engineering to materials science, mathematics and psychology. I don't need to know anything about this history when I touch the touchscreen. (c) Husserl's concept of technology explains how people in modern societies can cooperate with each other despite the high degree of division of labor: by presenting the products of the division of labor in a technical form, they can also be used by non-experts. (d) Husserl's concept of technology is not limited to material technology, but combines material, intellectual and social techniques; not as classes of objects, but as aspects of technology (as the history of the mechanization of mathematics shows). Finally (e) the historical development of science can be understood, which for Husserl leads into a crisis by no longer understanding the methodical-constructive steps as idealizations, because their meaning can be forgotten due to mechanization. Husserl therefore speaks of the scientific method as a machine whose meaning can be shifted.

³ Husserl's reflections on the philosophical approach are strongly influenced by the search for an orientation analogous to the empirical sciences. The idea of philosophy as a proceeding and accumulating enterprise, the role of evidence, description and epoché can only be understood against the background that the phenomena are self-given in »Anschauung«. Analogous to empirical observations. Is the empirical turn of postphenomenology therefore one from »Anschauung« to experience? If so, then the question arises whether postphenomenology has developed methodological concepts and a theoretical approach for this. Husserl's phenomenology, for example, is methodically oriented towards »epoché«, eidetic variation, phenomenal reduction, and finally transcendental reduction. Heidegger and Merleau-Ponty are similarly sensitive to methods. What does the empirical approach of postphenomenology me-

thodologically look like? Phenomenology has always been a method. On which methods is postphenomenology based? Historical case studies may be the application of a method, but they are not the answer to the question of the *empirical* method.

Dear Andreas:

I will call this letter **Pragmatizing Postphenomenology**. In your instructions for this triple series of letters, you call for a certain contestation, so I am replying in that spirit and limiting myself to the text of your letter (which mentions »I will be less interested in the connection to pragmatism...«). As I read your letter overall—so long as its sub theme runs—I remain Husserlean then I remain »within the scope of classical phenomenology and represent(s) an *internal differentiation of its ideas*.« I disagree and my hybridizing with pragmatism will show why.

As noted in my last letter, my textual roots go back to my second book, *Sense and Significance* (1973), and by the late 70's I began to pick up more and more Dewey and Rorty. Pragmatism has always been »progressive« and was from the beginning anti-essentialist already in Dewey and anti-foundational as per Rorty—as am I. If you see in particular my many quotations of Rorty who sees even Plato and Kant as no longer relevant, you will see the radicalness of this stance. I have taken it farther and hold, as a Jan. 2018 article in *The Journal of Dialectics of Nature* (China) argue, that even philosophies have »shelf lives« and should be abandoned.¹

1) Many folk know that in my later life, I published two books, both critical of my mentors, Husserl [*Husserl's Missing Technologies* (Fordham, 2015) and *Heidegger's Technology: A Postphenomenological Perspective* (Fordham, 2010).] I will here summarize the findings: I begin with *Husserl's Missing Technologies* even though it was the second published, because Husserl himself proceeds chronologically. I, myself, unlike you, do not believe Husserl ever really rose to a philosophy of technology, largely because he so thoroughly eschewed materiality—and remained deeply subjectivist and idealist. One does not, simply see him pointing to how the clock, or steam engines in railways or ships, transformed civilization—part of his »missing technologies.« But much deeper, as you point out »all consciousness is consciousness of something.« What I point out in *Husserl's Missing Technologies* is that the »thing« in its distinct and »object« sense [Cartesian] does not ever disappear from his notion of technologies since telescopes and microscopes remain for Husserl »telescope-things« and »microscope-things.« In short, he does *not* recognize as did Heidegger in *Being and Time*, the unique »withdrawal« of »know-how« or »readiness-to-hand« experience which Heidegger thinks primary in our technology experience, later still turned into living, bodily experience, *embodiment*, by Merleau-Ponty (see my chapter 3 in *Technology and the Lifeworld*, »Lifeworld: Praxis and Perception.«²)

2) I, unlike you, do not find Husserl aware of technological mediation in Postphenomenology's distinct ways. In *Husserl's Missing Technologies*, my most telling chapter is ›Husserl's Galileo needed a Telescope‹ since in what you take to his most telling technological insights are in the *Crisis*, I criticize precisely the *Crisis* for its overly mathematized view of science and its insensitivity to Galileo's four distinctive solar system discoveries made solely through the telescope. With Heidegger, my later critique is different, but still deeply touched by pragmatism. My critiques include his sharp distinction between traditional and modern technologies, a mistaken view which leads to what virtually all historians despise as seeing engineering as »applied science,« a mistake made identically by Mario Bunge, an early analytic philosopher interested in technologies.³

3) Closely related to this error, is a bit of Heideggerian hypocrisy, because in spite of presumably eschewing particular technologies, his writings—unlike Husserl's—are full of examples. But when I surveyed these over the years I found abundant evidence for his ›romantic‹ preferences in examples of old stone bridges with statues over modern steel bridges; Van Gogh-like peasant shoes over modern boots; water-mills over modern power plants; and above all, stone Greek temples which had replaced earlier wooden ones because the Greeks—as did all ancient Mediterranean cultures—had deforested the land. But my ›shelf life‹ pragmatist notion also enters. Heidegger died in 1976 and could not know of the then coming digital revolution, nor could his ›industrial sized‹ macro-technologies have foreseen the postmodern switch to micro or nano-processes. So what I take as a telling ›shelf life‹ criticism is Heidegger's sheer datedness regarding contemporary technologies. Much of Heidegger is simply put—outdated. I will return to this theme below.

Readers will note that I have not done a similar critical book on Merleau-Ponty. One reason is that while I continue to hold that Heidegger deserves his historical place as a forefather of philosophy of technology; it is Merleau-Ponty who inspires Postphenomenology. To my mind, phenomenology is not only a *praxis*, but a *praxis-perception* or *embodiment philosophy*. Postphenomenology examines concrete instances of human-technology interrelations, and an early discovery is that each technology engaged calls for nuanced embodiment skills. Thus, whether the technology is a scientific or a musical instrument, specific bodily skills are called for and for humans there will be a range of beginner or amateur to virtuoso performers. Today, fortunately, there are hundreds of such analyses, many appearing in our Lexington Books series on »Post-Phenomenology and Philosophy of Technology,« by equally hundreds of postphenomenology researchers. Postphenomenology today is one of the major approaches in all STS groups and conferences.

A New Materialization:

Although you claim that Husserl's powerful notion of ›technology‹ goes well beyond Idealization most of your examples come from idealization practices and often relate as we would agree to mathematization. I want to suggest a counterview concerning *materialization*. We would likely agree that astronomy and biology in early modern science became instrumentally (for me materially) embodied with telescopes for the former and microscopes for the latter. And my next book *Medical Technics* will look at the 20th–21st century of imaging technologies (both optical and acoustic; forthcoming Minnesota, 2019). But I have also argued that *mathematics* may be the last science to be technologized in *material* ways, i.e., digital and computerization. Granted, there are ancient anticipations, for example, largely Arabic navigational instruments, the famous Antikithera of antique Greek fame. But today most calculations are done by computer, the most revolutionary data/image transformation, synthetic modeling simply is not possible without computers or at speeds limited to the humanly possible (material machines can exceed these limits), now even making mathematics finally into a *technoscience*. This makes math much more materialized than imaged by Husserl, and idealization an even smaller part of mathematization.

Postscript:

I wish I could agree more with you. I also would have wished that Husserl saw technologies as ways of seeing, but if that were so, wouldn't he have given us examples? One of my critical ideas is of ›generic continental philosophy,‹ which I take as a kind of literary model. These philosophers attach themselves to some great (usually dead) thinker and spend much of their careers deeply attached and, in the process, become quasi-religious. So, *reference* texts become *reverence* texts. And because the great philosophers are finitely and contingently—like all of us—bound to what I take as a shelf life, they are not elevated above such contingency. I do not do that with Husserl or Heidegger—or myself who will also have a shelf life. If Postphenomenology does not, nor cannot see too far into future technologies, just as I think my forefathers were limited; so am I.

Don Ihde

Notes to letter 3:

¹ Don Ihde, »Should Philosophies have Shelf Lives?«. *Journal of Nature and Dialectics*, CN 11–151N, 2018.

² Don Ihde, *Technology and the Lifeworld* (Bloomington; Indiana University Press, 1990) pp. 31–49

³ Mario Bunge, »Five Buds of Techno-Philosophy,« *Technology in Society*, (spring, 1979).

Letter 4:

Dear Don,

Thank you very much for your rich letter. It contains many interesting thoughts to be discussed, most of which I will try to take up.

Let me start with an approving *prescript*. I agree that it is unfortunately common for philosophers to emerge all too slowly from their philosophical puberty, in which they choose one philosopher, who they adore and suspect to hold the key to all secrets. That was exactly what phenomenology was trying to avoid in parts by, on the one hand, replacing the interpretation of the interpretation with the investigation of phenomena and, on the other hand, trying to work out a method that would not only make this possible but to continue the work of philosophy more steadily. However, these lines are followed by a multiple »but«:

(1) Your work contains interpretations of other philosophical works. Obviously, this raises the question of the *appropriateness of your interpretation*. This is measured by the interpreted works themselves in the form of other interpretations. There is nothing wrong with that. How else should an interpretation be judged? You interpret the relationship between phenomenology and postphenomenology differently than I do with regard to the role of intentionality. The relationship between phenomenology and postphenomenology can, of course, be seen from a different point of view than intentionality (I called the »empirical turn« as a different view point). However, the role of intentionality is equally central to phenomenology and postphenomenology, which is why I have begun with it.

(2) Beyond the appropriateness of interpretation, it is a question of the *capability of the philosophical thoughts* to understand phenomena. I certainly do not think it helps to interpret Husserl or Heidegger or Merleau-Ponty in increasing detail in order to better understand learning algorithms. Confessions are misplaced here, but nevertheless I would like to clear up the possible misunderstanding that I want to stick to Husserl's phenomenology. My »only« concern is that I do not share your interpretation. I believe that parts of his considerations continue to be very powerful and useful. However, I do not believe that the systematic enterprise that Husserl intended can be carried out in the manner in which he envisioned it. This has much to do with his idea of eidos and the position of history in his philosophy. Here we are actually on similar terms.

(3) However, to understand phenomena – in this case: a specific technique – it is necessary, but not sufficient to simply turn to the object and open one's eyes. For our understanding, the level of analysis and even the perception of the object are dependent on the *notions that* guide and mediate perception (as the debates about the theory-ladenness of observation in science or Heidegger's description of the as-structure of perception show). And this makes the examination of the works of classical philosophers who knew nothing about learning algorithms fruitful for their understanding under certain circumstances.¹

(4) The last point, the historical dimensions of our notions challenge Husserl's phenomenology, especially his assumptions about evidence. This historicity also problematizes his assumptions about eidetic variation and here lies a strength of postphenomenology. From there, I asked you about the *method of postphenomenology*. The rejection of transcendental philosophy, ultimate justification and essentialism in postphenomenology are understandable, but call for methodological questions: What is taking the place of these assumptions methodically?

Having said that, I will now come to your points in detail, Don. I want to structure them according to the four levels I have just mentioned:

- (1) Adequacy of interpretation
- (2) Capabilities and merits of (Post-)Phenomenology
- (3) Notions
- (4) Methods

To (1): You criticize Husserl fourfold in your response. (a) Husserl does not deal with concrete technologies; in particular (b) he does not regard technologies as intentional mediators. You write: »I wish I could agree more with you. I also would have wished that Husserl saw technologies as ways of seeing, but if that were so, wouldn't he have given us examples?« (c) Where Husserl speaks of technology, it is almost only mathematics. In doing so, he misses the opportunity to grasp the receding of technology in know-how. Finally (d) the materiality of the technology is not covered. I agree with you on (a). There is hardly any discussion of concrete techniques. And yet I believe that the story is different for the other three points. The fact that Husserl hardly deals with *different techniques* does not mean that he does not develop an extremely powerful *notion* of technology. This consists, as written in my last letter, in understanding technology as the decoupling of the contexts of reasoning and discovery. However, this results in the following: The (c) receding of the artefacts in use forms the *center of* Husserl's concept of technology. This concept of technique is *not* only applicable to mathematics, but to *any classical technique*. Furthermore (b), Husserl perceives technologies as intentional mediators (not as the so-

something of consciousness, but as the mediator through which this something appears to us in a certain light). This is at least one important thesis of the *Crisis*. Technologized psychology (think of the so-called *Psychotechnik* around 1900) and physics are the technologies through which nature and people appear to us in a certain light. Husserl thus treats technology at a high level of abstraction, but in an informative and comprehensible way. It is not a single technique (the telescope), but the *combination* of intellectual, social and material techniques that makes nature and mind appear in a certain light in physics and psychology. However, the question of materiality (d) is more difficult to answer than it seems (think of Derrida's Husserl interpretation of the third supplement). The inheritance of techniques, including intellectual techniques, is (also) material.²

In your review of Heidegger, you mentioned three points. The first (a) criticizes the sharp distinction between traditional and modern technology. But this criticism does not consider that Heidegger regards modern technology *not* as a special type of artefact (a machine which has its special characteristic in a feedback loop, for example), but as *a form of rationality*, that is, as a form of the relation between world and self. This level must be considered: When we compare different technical artefacts with each other, ancient and modern artifacts, this does not apply to the level where Heidegger primarily sees the difference. For this reason, (b) your interpretation that Heidegger understands engineering as applied science seems wrong to me. Heidegger considers (and you yourself emphasize this point in many of your writings) science as an applied technique. It goes without saying that Heidegger (c) now does not know contemporary technologies (think of nanotechnology), and therefore does not take them into account. But this is also not the level on which technology as a whole is viewed by Heidegger. It is precisely what the various concrete techniques that he names have in common, namely, that they reflect *one* form of the rationality of modern technology for him. He is not so interested in their particularity. In short: For Heidegger, modern technology is modern rationality as a relation to world, not a special type of machine.

This brings me to (2): the capabilities of phenomenology and postphenomenology. *Classical* phenomenology has its merits in the development of a concept of technology that grasps it as an intentional mediator, as the form of the relationship between self and world. This also indicates its weakness. It has little or nothing to say about *differences* of concrete technologies. This is where postphenomenology develops its great potential. Postphenomenology was the first phenomenology to take an interest in the various technologies. And it has developed a rich description of the particular technically mediated experiences. Has this also resulted in the development of basic concepts and methods? Or is the difference primarily in another area of interest?

This leads to (3) and (4): Which novel terms and methods has postphenomenology developed? The multistabilities, which you discovered in a wonderful way, lead to a multiplication of the modes of intentionality (embodiment, hermeneutic, alterity, background relations). Nevertheless, as I said in my first letter, it seems to me that these are differentiations *within* intentionality. In addition, these variants are already outlined in varying clarity in classical phenomenology.

Is therefore the peculiarity of postphenomenology to be found in the pragmatization of phenomenology that you mentioned in your letter (as well as in your books)? But what does this mean? That the role of action is much more important than in classical phenomenology? That would be one conceivable way which I see you have only partially taken. You, too, often deal with instruments that extend and change our *perception*. The role that action plays in discovery is not excluded by this (even when we perceive, we act as you yourself show us). But is this already the pragmatization of phenomenology? Or does it rather lie in the anti-essentialism mentioned above. This also refers to the empirical turn. However, here I would indeed like to see more information about the method. It could provide information on the extent to which a new, *different* phenomenology has been developed with postphenomenology.

Postscript

I have the impression that the achievements, the intellectual joy and the beauty of the findings of your works do not result from a comparison of phenomenology and postphenomenology, as long as we try to understand this difference primarily on the basis of their basic notions and methods. If we were to place the texts of classical phenomenology, which deals with technology, next to your philosophical descriptions of technology, we would recognize the differences and the gain more clearly. What does that tell us, though? That perhaps the potential of your works unfolds on a different level, and perhaps in a way that is not yet quite understood?

Andreas Kaminski

Note to letter 4:

¹ For two attempts, see Resch, Michael; Kaminski, Andreas (2019): »The Epistemic Importance of Technology in Computer Simulation and Machine Learning.« In: *Minds and Machines*, p. 1–9; Kaminski, Andreas; Resch, Michael; Küster, Uwe (2018): »Mathematische Opazität. Reproduzierbarkeit in der Computersimulation.« In: *Jahrbuch Technikphilosophie* 4, p. 253–277.

² I am also unsure whether the reference to materiality is not too vague. This is particularly evident in view of the mechanization of mathematics that you mentioned at the end of your letter. The computer is crucial for this. But the computer can be viewed on very different levels: electrophysical, machine language, logical, mathematical, high level language. For the understanding of computerized mathematics, the specification of materiality is just as necessary as it is insufficient.

Dear Andreas:

Your response poses a dilemma for my third letter—I have the double need to respond to your insightful criticisms, plus add the new theme of political-social dimensions concerning postphenomenology. I will do the best I can by dividing this letter into part I and II.

Part I:

Here is my response to your first page: I, shamefully or not, simply admit to starting out as a »generic continental«, or, as you disparagingly call it »philosophical puberty«, maybe therefore my »puberty«—after all, I did my dissertation on Ricœur and subsequently did 9 more articles on his work. And early on, some of my work interpreted the major phenomenologists, thus proving my apprenticeship. Besides, in those days, these were the best ways to get on programs or get published. But also fairly early, after seeing how Bill Richardson, after publishing *Heidegger: From Phenomenology to Thought* (1963), just when I started to attend SPEP [Society for Phenomenology and Existential Philosophy], himself began to play the role of »Mr Heidegger,« a sort of official interpreter of Heidegger, I made a deliberate decision, instead, to *do original* phenomenology, after Husserl's advice, which resulted in what I would call my first two original phenomenology books: *Listening and Voice* (1976) and *Experimental Phenomenology* (1977). The first set me aside as a phenomenologist of acoustic-auditory phenomena and opened a lot of interdisciplinary doors; the second, more radically, thinking I was following Husserlian phenomenology, led me to discover quite contrary to Husserl, »multistabilities« instead of »essences.« What had in both philosophy and psychology considered to be 2–3 variations, turned out to be 5–10+ variations, a central notion today within postphenomenology

Then, in the spirit of the 20th century both the *praxis turn* and the highly influential Rorty-neopragmatist anti-foundational turn, at the same time of the emergence of »science studies«, I began to hone a modification of phenomenology as *postphenomenology*. This turn affected *intentionality* as well, too. I think we would have to agree Husserl's intentionality was cast in an ego-mental tone as *ego-cogito-cogitatum*. I had already rejected that tone, favoring the more »existential« tones of Heidegger and Merleau-Ponty's *being-in-the-world* of Heidegger's *Dasein* and Merleau-Ponty's *corps vecue* or *perceptual embodiment*. What the mid-20th century science and cultural studies added was a sense of *inter-relationality* or *co-constituti-*

on which went through, for example, technologies, that to my mind got intentionality farther from ›subject/object‹ thinking [you may note I strongly prefer not to refer to techniques, preferring instead *technics* from Lewis Mumford's *Technics and Civilization* (1934). In English, at least, ›technique‹ clearly means something a human learns and does, thus, there can be musical technique—with or without an instrument—sexual technique, sports techniques – again with or without a tennis racquet or ball, etc. Technics cannot be without a technology. So we, or at least myself, are back to rejecting Husserl's ›egoistic‹ form yet again]. Thus, if we ›make‹ technologies; technologies co-constitutionally ›make‹ us. I have many examples as evidence from the history of anthropology. There is rich evidence that making stone tools changed diets which changed human shapes. This proximity to animal studies, by the way, also helps move my use of intentionality closer to the pragmatist favoring of an *organism-environment model* as favored by Dewey, or a *relativity one* as per Einstein.

Part Two: Political-Social dimensions to Postphenomenology

The longest, single criticism I have undergone relates to normativity, with most critiques coming either from pragmatists who think I am not Deweyan progressive enough, or critical theorists who think I am not Marxist enough. While I admit I am not ›deweyan‹ or ›marxist‹ and neither could I ever situate anywhere near Heidegger's reactionary cultural-political proclivities, neither am I near a Husserlian worry about his perceived decline of European rationality. Instead, my sympathies are closer to a Merleau-Pontean stance, particularly when he claims: ›What I maintain is that there is strongly an informing of perception by culture which enables us to say *that culture is perceived*.‹ (*The Visible and the Invisible*, my emphasis, Northwestern University Press, 1988 [French 1964], pp. 212.) Or, if we wanted to incorporate Ricœur, we *are already oneself as another*. Then in *Technology and the Lifeworld*, I described what I took to be the simultaneous human experience of basic bodily perceptuality to which we also have a cultural perception [cultural hermeneutics] (Indiana University Press, 1990, cultural hermeneutics, pp. 124–131.) In short, postphenomenologically we are simultaneously self-and other-aware; hence, already always both individually and socially aware—thus, indirectly political. But, when seen from the perspective of multistability, our politics is necessarily plural as is our culture.

In your letter you admit that Husserl does not deal with concrete technologies. Moreover, in your context, you admit that Husserl's philosophy of technology, which you claim is highly powerful *precisely because it is a high level abstraction*, refers to a mediated way of seeing. With this, you now convince me of an abstrac-

tion, although a highly mathematized one. That this abstraction is different from Heidegger's and in turn, convinces me that Husserl's abstraction not only leads to his failure to deal with concrete technologies, but that he *cannot* deal with concrete technologies because of its essentialistic abstractness. So we are back to why post-phenomenology, as you admit, does deal with concrete technologies. So, we sort of end with loggerheads. You will continue to see (I say ›reduce‹) the multiple ways we experience technologies as simple modes of intentionality, where I will see the two kinds of essentialism now found in different ways in both Husserl and Heidegger, as hopelessly bound to the past of an essentialistic metaphysic, or transcendently-bound philosophy.

I want end with your claim that Husserl sees that the contexts of reasoning and discovery are decoupled. There is a related sense in which I like this. I have long argued that the ancient Greek era—not the multi-cultured Hellenic era—used instruments, and made several what today would be recognized ›scientific‹ discoveries—see below. I have long felt that both Plato and Democritus, contemporaries and enemies, actually used a similar mode of non-technology reasoning to arrive at an unexperiencable ultimate reality/with Plato's forms or Ideas; with Democritus' unexperiencable atoms in a void, using only non-technological reasoning. Both end up with imperceptible things as ultimate, thus ›fantasies.‹ Today, these fantasies are laughable since we trap individual atoms; we depict individual photons in motion, and even detect gravity waves. In contrast, Hellenic Greeks, using instruments in addition to simple math, made good measurements of the size of the earth and other approximately accurate measurements of geographic and solar phenomena. Hellenic Greeks were also experienced multiculturalists which to my mind helps discovery. Another less known example, again multicultural, was the 9th–1th century Baghdad Academy which published the first book on algebra and combined Jewish, Christian and Islamic scholars in a largely scientific academy, which had research teams and labs. Thus, for me, it's back to Galileo's telescope—his discoveries, cited in my ›Husserl's Galileo needed a telescope‹ (*Husserl's Missing Technologies*, 2015, pp. 35–58) has Husserl lacking Galileo's concrete technology which historically convinced him to shift from his support of Ptolemy as late as 1597 to Copernicus by the mid 1600's—Galileo first made and used a telescope in 1609! For me, it is yet another illustration of no technologies, no science, and of phenomenology without post-phenomenology, incapable of getting history right.

This exchange has been a pleasure. And even if we do not agree on the roles of phenomenology and postphenomenology, the journey has been fruitful.

Don Ihde

Dear Don,

Your last letter arrived well, and I had to think for a while about how I would like to answer – also because I didn't feel like letting our conversation end now.

Your reflections on the role of politics and ethics in phenomenology and postphenomenology contain two points that I would like to put into a certain context. The first point sounds like a coincidental fact in the history of reception, but I do not think it is: You wrote that your postphenomenology has been criticized most strongly, and equally from very different sides, with regard to its normative dimension: It would not be pragmatically progressive enough or Marxistically critical enough, and so on. What strikes me is that the criticism took this form: not enough x or y. And not: Your postphenomenology is politically too much z. Why?

If we look back to the three founding figures of phenomenology: Husserl, Heidegger, and Merleau-Ponty, an interestingly ambivalent impression emerges. On the one hand, it could be said that none of them has written on ethics. Certainly, Husserl gave *Vorlesungen über Ethik und Wertlehre* (Hua 28), in his »Fünf Aufsätze über Erneuerung« he develops the idea of ethical forms of life. Heidegger's *Sein und Zeit* can be regarded as a phenomenological reading of Aristotelian *Nicomachean Ethics*. Merleau-Ponty's *Humanism and Terror* is a political diagnosis of his age and a contribution to political philosophy. But none of these authors has written a text that can be regarded as their main work being dedicated to ethics or practical philosophy. On the other hand, it seems to me that the role of ethics and politics in phenomenology is not limited to writings that carry words like ethics in their titles. The contributions of classical phenomenology to ethics and politics – despite Scheler and Hartmann for instance – may be found in completely different places.

Before I come to talk about why this impression may be important and what speaks for it, I would like to talk about the second of your points. You write, after the circle of discussion seems to be closing and we seem to end at our positions again: »So, we sort of end with loggerheads. You will continue to *see* (I say ›reduce‹) the multiple ways we experience technologies as simply modes of intentionality, where I will *see* the two kinds of essentialism now found in different ways in both Husserl and Heidegger, as hopelessly bound to the past of an essentialistic metaphysic, or transcendently-bound philosophy.« (my emphasis)

Ironically, it is this passage that gives me the impression that we are very close to the ethics and politics of phenomenology. Phenomenology has perhaps shown most emphatically how we find in our own perception what is not our own. That in our perception the language and the forms of our life are already present in a way that is withdrawn from us. (This ambivalence also seems to me to characterize the concept of the phenomenon, which is by no means an example or the literary description of a stream of consciousness.) Hans Blumenberg has perhaps most impressively summed up this consideration in an essay frequently received in German philosophy of technology (»Lebenswelt und Technisierung unter Aspekten der Phänomenologie«): With Husserl and against Husserl he argues that the concepts in which we structure the world and which are already central to the perception represent a form of »Technisierung« that corresponds entirely to Husserl's concept of technology, but has been completely overlooked by Husserl because it would have posed major problems for his program (final justification, evidence). Blumenberg therefore speaks elsewhere (in his book *Lifetime and World Time*) of a misunderstanding of the »Lebenswelt«, inasmuch as the life world appears to be the fullness of the untechnical world; although, according to Blumenberg, it is best embodied in the high-tech amusement park in which all expectations come together.

For Blumenberg, therefore, every perception is already technical because of its conceptual nature. It is this thought that appears in the classics of phenomenology in different variants: in Heidegger's analysis of the *as*-structure of perception, which allows perception to become an understanding or in Merleau-Ponty's description of the understanding of the body that incorporates technique.

But why do I believe that this contains a political and ethical perspective of phenomenology? And what would be the connection between that thought and your two points?

Husserl's *Krisis-Schrift*, Heidegger's *Sein und Zeit*, »Die Technik und die Kehre« or Merleau-Ponty's *Phänomenologie der Wahrnehmung* (*Phenomenology of Perception*) show to what extent perception is already thoroughly integrated into what we call a culture today. In addition, they show that this culture is highly dominated by technology. Let us go back to Heidegger's philosophy of technology: According to his analysis, the perception of a river is characterized by a technical »as« structure, in which the river appears *as* an energy supplier. By showing in detail the extent to which our technical relations are accentuated in »seeing«, phenomenology makes perception technopolitical. By showing to what extent this continues into our conceptual intellectual techniques, Blumenberg makes thinking »technical« in a very special but fundamental sense; it is thus the place for critique of technology as ethi-

cal-political work on our self and world relations. There is much to do from this general proof to an analysis of concrete techniques like you presented to us, however, it seems to me to be a rather continuous way.

To quote you, but to put the ›post-‹ in brackets: »In short, (post-)phenomenologically we are simultaneously self-and other-aware, hence already always both individual and social – therefore, indirectly political.« This idea of locating ethics and politics on a fundamental level of our thinking and perception, i.e. not as a specialist discipline, seems to me to be formulated by classical phenomenology and postphenomenology. Therefore, the critics find it difficult to answer the question: To what extent is there a phenomenological ethics or politics? These are not simply special disciplines for phenomenology, but dimensions of thought and perception. From here there is a continuous line from the politics of thought to the politics of artifacts. This pronounced sense for the rich events in our perception and thinking I find, further developed, in your works.

Thank you, Don.

Andreas Kaminski

