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Reimagining Philosophy and Technology, Reinventing Ihde

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Chapter 4

Ihde's Pragmatism

Paul B. Thompson

4.1 Introduction

Anyone who has maintained a sustained philosophical relationship with Don Ihde that includes face-to-face interaction has probably heard him acknowledge a pragmatist bent in his thought, but it is only recently that he has begun to acknowledge this in his writings. In *Experiential Phenomenology: Multistabilities* (2012), Ihde characterizes postphenomenology as “pragmatism + phenomenology” (p. 115). Ihde also provides a brief critical discussion of John Dewey (1859–1952) and Richard Rorty (1931–2007) in his book *Husserl's Missing Technologies*, and titles one chapter “Adding Pragmatism to Phenomenology” (Ihde, 2016). These two late books publicize Ihde's sympathy to pragmatism, and they respond to ways in which others working in the philosophy of technology have sought to link Ihde's work to pragmatist philosophy. But there is still work to be done in exposing his pragmatist proclivities.

One obstacle to understanding Ihde's pragmatism resides in the fact that philosophical pragmatism is itself not well understood or widely taught at this time. While Ihde's own texts are remarkably clear in their articulation of his pragmatist commitments, many contemporary readers lack enough background in the thought of classical pragmatist thinkers such as Dewey, Charles Sanders Peirce (1839–1914) and William James (1842–1910) to grasp in full what Ihde is saying in making these linkages. The potential for confusion is multiplied by the fact that there are important differences *within* pragmatism, especially when the thought of Peirce, James and Dewey is contrasted with that of later linguistic pragmatists such as Rorty, Willard Van Orman Quine (1908–2000) or Donald Davidson (1917–2003). This chapter will thus provide an introductory summary of some key pragmatist doctrines and then identify elements in Ihde's thought that are aligned with these

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doctrines in significant ways. In doing so, steps will be taken toward disambiguating classical and neo-pragmatist philosophy.

In addition, it is useful to show how Ihde's pragmatist commitments distinguish his thought from that of other contemporary philosophers working in the Continental tradition. An appreciation of Ihde's writing on technology and embodiment should highlight its consistency with the implicit metaphysical commitments of the natural sciences, including evolutionary approaches that are currently being explored within cognitive neuroscience. Ironically, it is in seeing the influence of work by earlier pragmatists that allows for such a reading. As such, this chapter a) clarifies how pragmatism should be understood as a philosophical school of thought; b) introduces and explicates how early pragmatists drew upon evolution to reformulate their approach to epistemology; c) explains how the naturalism of this approach differs from the lingering idealism of Continental thinkers; and then d) identifies the threads in Ihde's work that are most indicative of these two characteristically pragmatist tendencies. The concluding section briefly recounts how this reading of Ihde takes postphenomenology beyond accounts that have been made by others working in the philosophy of technology, and establishes Ihde's stature as a thinker who avoided some of the most costly philosophical blunders of the twentieth century.

4.2 Some Preliminary Expectations

Pragmatism is a complex school of philosophy that does not admit of easy classification. Like realism, idealism, empiricism or rationalism, pragmatism exists in many variants, and there is arguably no single doctrine that either unites all of them, or that distinguishes a pragmatist from an advocate of some other philosophical doctrine. The fact that its proponents tend to disavow *being* pragmatists is one non-essential feature that does mark pragmatism against these other isms, though even this appears to be declining. Peirce, James and Dewey each expressed qualms about being identified as pragmatists and both Peirce and Dewey explicitly dissociated themselves from the appellation after having initially identified their thought as pragmatist. Rorty relished the pragmatist identification, though scholars of the earlier pragmatists questioned it (see Campbell, 1984).

Pragmatism is often pithily defined by the phrase "whatever works," an epithet that brings to mind a willingness to sacrifice moral principle, scientific rigor, and even logical consistency in pursuit of expediency in accomplishing a given end in view. This is, of course, not what philosophical pragmatists commit themselves to, and it is worth noticing that other isms suffer a similar fate when translated into colloquial speech. In common conversation an idealist is someone who pursues lofty purposes even in the face of insurmountable obstacles, while a materialist is someone who places an inordinate value on the accumulation of money and purchased goods. Neither has much to do with the philosophical traditions we associate with these terms. Yet while even the greenest freshmen will be quickly disabused of their naiveté when embarking on a more sophisticated study of idealism or materialism,

there have been (and perhaps still are) professionally employed scholars who associate "pragmatism" exclusively with its vulgar formulation. Political science, in particular, seems to have no understanding of pragmatism's epistemic, moral or political doctrines, understanding a pragmatist as any political actor who has a keen appreciation of what can be achieved, given the institutions and opportunities presented by current events. For example, Patricia Fosh and four coauthors use the term 'pragmatism' to explain why Conservative governments in the United Kingdom have compromised their ideological principles in order to achieve short run policy changes (Fosh, Morris, Martin, Smith, & Undy, 1993), while *The Guardian* newspaper uses the word 'pragmatic' to identify what separates Barack Obama's progressivism from that of Bernie Sanders (Siddiqui, 2016).

While materialism is opposed to idealism, and rationalism is opposed to empiricism, pragmatism does not have a clear opposite among recognized philosophical schools of thought. There is some truth in thinking that pragmatism tries to draw from opposing philosophical traditions in fashioning something like a compromise point of view. Pragmatists have also tended to eschew the human tendency toward dichotomizing. Dewey in particular railed against dualisms of every sort. As a matter of intellectual temperament, pragmatists are ill-disposed toward an analytic insistence on sharp distinctions and strict, non-overlapping categories. They are not surprised or particularly exercised by borderline cases and difficult to classify outliers. There are many philosophers who, to use a food metaphor, want a plate where the peas are strictly separated from the mashed potatoes. It seems likely that thinkers with this bent are indeed inclined to classify pragmatism as a "whatever works" philosophy simply because its tolerance for gradation and indeterminacy is just incomprehensible to their own understanding of the philosophic ethos.

But contrary to the unflattering epithets, pragmatists do have philosophical commitments of a characteristic sort. Like realism or idealism, one could write many books sorting out the views that pragmatists hold and the doctrines they deny. The task has grown more onerous over the years. James famously characterized pragmatism as "a new name for some old ways of thinking" (James, 1907), explicitly acknowledging that he and Peirce (along with other members of the Cambridge "metaphysical club" Chauncey Wright [1830–1875] and Oliver Wendell Holmes, Jr. [1841–1935]) were drawing upon philosophical doctrines that have a long history prior to the emergence of pragmatism in the last quarter of the nineteenth century. As Cheryl Misak has argued, the next generation of pragmatist thinkers after James almost never referred to themselves as such, preferring to be called "critical realists." Pragmatism then took its linguistic turn in the second half of the twentieth century, leading to what is arguably an importantly different set of philosophical commitments from those we associate with Peirce, James, and Dewey (Misak, 2013).

The task at hand is not to develop a coherent (much less authoritative) historical overview of pragmatism, but rather to illuminate the pragmatist threads in Ihde's work, particularly those that would distinguish his thought from other philosophers who have drawn heavily on the work of phenomenology. While Ihde's reputation stands on his interpretation and adaptation of themes introduced by Edmund Husserl (1859–1938), Martin Heidegger (1889–1976), Maurice Merleau-Ponty (1908–1961)

and Paul Ricoeur (1913–2005), which are explored and extended in other contributions to this volume, the focus of this chapter is to examine how pragmatism also contributed to and perhaps differentiated Ihde's thought from that of other American philosophers who drew heavily on the same European thinkers. With this aim in mind, the next two sections explore pragmatist themes on epistemology and naturalism that differentiate Ihde's work from other postmodernists.

4.3 Some Pragmatist Doctrines: Epistemology

For some philosophers, belief is conscious assent to a proposition, while for pragmatists it is that on which a person is prepared to act. Removing the word 'conscious' brings one closer to the pragmatist view, but the "that" specifying the content of belief for pragmatists is also considerably broader than anything captured by the propositional form. Postwar linguistic pragmatists like Quine or Davidson might be said to have reconciled these conceptualizations of belief by theorizing the philosophy of language in terms of syntax, semantics, and pragmatics. For them, syntax addresses formal or algorithmic elements of grammar, leaving the sense and reference of linguistic formulations to the other two domains. Pragmatics is the contribution of contextual situation over and above the coding supplied by semantics. Context (or situatedness) supplies all that is needed to reconcile the potentially ambiguous ways to interpret sentences like "You've got a green light." A hearer will simply "know" whether this means that you can proceed (driving a car), whether it refers to ambient lighting, whether it is clarifying what kind of Christmas bulb you are holding, or whether it is a metaphorical indication of permission to proceed on a previously determined or contextually specified course of action. Numerous linguistic theories for pragmatics share the presumption that a theory of contextually precise and explicit conventions could indeed complete the meaning-giving element of language into the theory of propositions. However, pragmatists (including Quine and Davidson) have typically been skeptical about the possibility that any theory could do so in a rule-governed or determinative fashion. Hilary Putnam (1926–2016) argued that any model-theoretic approach to pragmatics could not duplicate human language use in real time because the activity of specifying the model would introduce novel pragmatics faster than the model could incorporate them (Putnam, 1978).

Such forms of linguistic pragmatism are often what contemporary philosophers have in mind when they hear the word 'pragmatism'. Richard Rorty referred to this shift in philosophy's orientation as "the linguistic turn" (Rorty, 1992). However, the first generation of pragmatists were interpreting the "that" on which a person is prepared to act somewhat differently—one might say biologically. First gen pragmatists (e.g. Peirce, James and Dewey) understood action under the framework of organism/environment interaction. Psychologists of their time (recall that both James and Dewey were prominent among them) were gravitating toward a stimulus/response logic that would eventually become the basis for behaviorism. The prag-

matist view held that repetitive association could not explain the relationship between stimulus and some arbitrary form of conduct or behavior. Psychology must instead be attentive to the way that the response of a person (or any organism) reflects an orientation toward the milieu in which a stimulus is situated. The organism is "primed" or pre-adjusted, so much so that only certain occurrences even *can* function as stimuli. Peirce, James, and Dewey emphasize the role of habit in establishing and specifying the priming of a given organism. To use terminology that would never have occurred to first gen pragmatists, we might say that an organism's prior engagements with its environment "program" the organism for future engagement.

Ihde himself highlights the pragmatist shift away from representational epistemology and toward a dispositional approach in his account of postphenomenology (Ihde, 2012). First gen pragmatists were cognizant of distinct ways in which dispositions could be acquired, evident in a distinction between instinct and habit. Influenced profoundly by Charles Darwin (1809–1882), they explain both as evolutionary products, but they had a much broader understanding of evolutionary explanation even than many contemporary sociobiologists. Instincts might well have been products of natural selection, but habits themselves were produced by an evolutionary mechanism operating at the level of a single organism's experiential interaction with its surrounding world. Organisms (and for Peirce, at least, even non-living matter) were pre-disposed toward "habit taking." For present purposes, we can interpret this as a capacity both to generate systemic or repetitive behavioral responses (possibly instinctually) to events in the environment, and to do so with degrees of variation in the specific behavior exhibited at any given instance. Given this basic structure, it is possible for environments to exert selective pressure on the entire population of responses, leading the organism to "learn" or, more precisely, to repress variants of a given type. A habit, then, reflects the repetitive generation of conduct types and a reduction of the range of variation in possible conduct types afforded by the organism's instinctual capacities and previously acquired routines.

Darwinian natural selection, in contrast, exhibits a similar logical structure, but operates on the biophysical phenotypes that (we now know) are produced by genetic reproduction *and* variation through recombination, availing a population of interbreeding organisms with significant variation in their individual phenotype. For a pragmatist, to have a belief is to be predisposed or "primed" by habit to respond toward events in one's environment in a given manner. Some of this priming may be conscious or programmed in language (not that these are the same thing), but much of it will be continuous with other organisms that (we presume) lack these attributes. To extend the point beyond what the first gen pragmatists themselves said, we are fully justified when we attribute beliefs to many non-humans, even if it is not plausible (as Davidson, 1982 argued) to attribute grammatically complex beliefs to them. Peirce, James, and Dewey would likely not have used words like "belief" or "action" to describe the organism/environment responsivity of plants, but the general point here is that even if there are distinctly human phenomena to be identified in the course of doing epistemology, they are fully continuous with a large class of biological formations.

Dewey's work, in particular, applies the logical structure of evolutionary adaptation and habit forming across a number of different media. For example, Dewey's *Human Nature and Conduct* develops a theory for habituation that begins with individual psychology. Here, behavior originates in the brain and becomes habituated as the neural patterns are reinforced. A contemporary account would note the role of dopamine in this process, and Dewey's psychology is entirely consistent with this account. But Dewey goes on to describe how customs and folkways are also products of an evolutionary process in which success or failure in reproducing patterned behaviors among a social group becomes the selection mechanism. In these social contexts, reprobation and praise might be doing the work that dopamine does in the brain, but importantly, simple cooperation and coordination of action among individuals also supports a repetition or reproduction of patterned behavior, while behaviors that elicit no response (or a counterproductive response) are less likely to be repeated (Dewey, 1922). Dewey viewed universities and academic disciplines themselves as a medium in which bodies of theory and practice are reproduced, and his critique of philosophy held that the selection mechanisms determining academic practice (e.g. hiring, promotion and tenure) were out of sync with the societal functions that the discipline of philosophy should perform (Dewey, 1920).

Introducing a usage not found in Dewey, I will refer to these media as "platforms." Most obviously, the Mendelian platform of genes produces not only speciation (the phenomenon of interest to Darwin) but also an enormous variety of affordances among individual organisms within a population. Dewey discusses the acquisition of motor response as a similarly evolutionary development of the neural platform in vertebrates (a platform he was as ignorant of as Darwin was of Mendelian genetics). It is important to see that although genes serve as a platform for the reproduction of a biological phenotype (and hence for brains), the neurological structure of the brain itself is a distinct platform that develops through an evolutionary process of learning. While some neural patterns are instinctual (part of the neural architecture) others, such as walking, are learned. Memory emerges as a further platform—or, more precisely, probably several platforms—that facilitates the acquisition of the more complex reflective activities that are the target of his educational theories. Here the multi-platform ontology becomes especially significant. Nineteenth century educational psychology emphasized associationism and repetitive drill. Dewey's approach to education might be characterized as one that mimics Darwinian selection. Memory itself will do the work of repeating a behavioral routine for Dewey, but the point of pedagogy is to create an environment in which the memories that become habituated are functionally reinforced for the person being educated.

But this is not the end of multi-platform evolution for Dewey, because educational practice itself is one socially reproduced platform (an institution) among many. Institutions are the way they are because human beings as a species have acquired capacities for reproducing social forms. Some institutions survive from decade to decade, but others disappear. Attention should be given to evolutionary mechanisms at work within the clusters of institutional practice called society or culture. And of course societies are themselves products of selective pressure exerted

by a more comprehensive natural world, leading Dewey to a partial (but significantly modified) agreement with Herbert Spencer's social Darwinism (Dewey, 1904). But for Dewey this high-level Darwinism is deeply qualified in two respects. First, the much more heavily nuanced account of multiple platforms supports the potential for significant change and learning *within* any given culture. Second, Dewey sees many extant habits (personal as well as social) as holdovers from no longer functional episodes of habit-forming. This is the point he makes about universities and disciplines as institutionally constituted platforms that reproduce patterns or social habits that have ceased to serve the functions that led to their original institutionalization. He is thus loath to condone the celebratory aspects of social Darwinism, urging us to be forever on the alert for the need to reform our habits in a more reflective way.

This last aspect of Dewey's thought reflects the emphasis on fallibilism in pragmatist philosophy. We can always be wrong. Pragmatist fallibilism may fail to impress the casual reader: doesn't everyone think this way? A detailed response would go well beyond the remit of the present essay, but it is important to conclude this snippet on pragmatist epistemology with a few remarks on what pragmatists think they get from laying unusual stress on human fallibility and the limits of our knowledge. First, note how pragmatist fallibilism follows from the evolutionary account of habit taking: What we think we know (our belief) is a function of an evolutionary process, and evolution is replete with failures. Second, as conscious and language-enabled beings, this evolutionary process includes our history. The fact that our habits have gotten us this far is a reason to rely on them—indeed, what else *could* we do?—but history also teaches us that things might be different in the future. Our evolutionary history has equipped us with a critical capacity that we are advised to deploy in analyzing our current situation. Finally, fallibilism is pragmatism's expression of epistemic humility, a feature that non-pragmatists seem to be rediscovering in the Anthropocene (see Burton & Brady, 2016). It is a link between epistemology and ethics that pragmatists borrow from the stoics (Lachs, 2012). But this should not be surprising. As James said, pragmatism is a new name for some old ways of thinking.

4.4 Some Pragmatist Doctrines: Naturalism

Perhaps it is foolish to introduce the term "naturalism" as an explanatory device because naturalism itself is vague and subject to many distinct interpretations. It is, nonetheless, a term that pragmatists themselves (and especially Dewey) have favored (Papineau, 2016). Defined broadly and within the context of the late nineteenth century, naturalism meant a turn away from concern with supernatural entities and a break with self-consciously religious philosophical doctrines. By this standard, many and arguably most contemporary philosophers are naturalists. But for the first gen pragmatists, there were also concerns afoot in distinguishing their views from the philosophical traditions of German idealism. Since this influence carries over into the founding figures of twentieth century Continental thought and

phenomenology, it is worth taking additional pains to clarify the naturalism that characterizes Peirce, James and Dewey, on the one hand, and (as will be argued below) Ihde, on the other.

Given what has just been said, it perhaps goes without saying that when pragmatists talk about "the environment" they mean *both* natural and social worlds, including the culturally inculcated world of language, speech, the arts and history. Given their aversion to dualisms, pragmatists are going to balk at any metaphysics that presumes or builds sharp distinctions between these worlds. But there is also more to be said here about how pragmatists understand the world, which is also to say, how they understand experience. It is a particular and characteristic response to Kant, and one that distinguishes pragmatists from many other figures working in the phenomenological tradition. Oversimplifying a bit, after Kant idealist philosophies are attempts to both take with utmost metaphysical seriousness the claim that we cannot get beyond experience while also making some sense of the obvious fact that our experience is given (or, alternatively, *taken*) as occurring in a world that exists independent from our sensory access to it. The natural sciences, in particular, seemed to demand some ontological account of the physical objects and forces from which nature was said to be composed. Perhaps most obviously in F.W.J. Schelling (1775–1854), idealism develops a repertoire of tropes for postulating (and expounding) an experience of externality consistent with an understanding of experience as pure and self-substantive spirituality, as if a subjectivity could persist (if perhaps not exist—that is, be separately) apart from the pesky atoms, molecules, and organisms that were the emerging subject matter of the natural sciences (von Schelling, 1799). Externality (and with it the experience of a world containing material objects) arises as spirituality strives toward realization in an ascending cascade of ever-greater and more comprehensive forms of self-awareness.

The Germans have a word for this process: *aufheben*. Translators generally insist that there is no adequate English equivalent, though perhaps the obscure word 'sublation' comes closest. The point is to indicate a process in which opposites or opposing forces maintain a conflictual or contradictory relationship that seemingly calls for the annihilation of one or the other, yet this conflict or tension gives rise to a more comprehensive unity or whole in which the tension is able to persist. The early German idealists (such as Schelling) saw the emerging physics of positively and negatively charged particles in such terms, and one might stretch the idea to encompass the way in which ecosystems persist by balancing (and not fully reconciling) a number of competing forces. But as already indicated, in Schelling and later G.W.F. Hegel (1770–1831) *aufheben* was deployed as a term for transformational moments of expansion in consciousness or spirituality. As already noted, Schelling's philosophy takes the very mode of existence that we attribute to positively and negatively charged particles as a product of exteriorization inherent within spirit—one instance or species of *aufheben*.

While this caricature is not entirely fair to philosophical idealism, it is adequate for contrast to the materialism that I argue is more consonant with the presumptions of most contemporary natural scientists. To wit: consciousness, mysterious though it may be, is an emergent phenomenon that supervenes or at least ontologically

depends on the existence of atoms and molecules, organized as living organisms with suitable neurological capacities. Working out the details of such a view would take us too far afield. The twentieth century in philosophy can be drastically oversimplified as a time when many philosophers simply decided that it was time to accept the dominance of the approach of natural science to these questions, perhaps reframing philosophy as an inquiry into the nature of language. Bertrand Russell (1872–1970) would be one prominent exemplar of the trend, while Quine and the other second gen pragmatists might be others. Yet both within this language-obsessed tradition and beyond it, the tropes for expositing *aufheben* continue to be deployed. Perhaps the persistence of philosophies that exposit worldliness as an emergent property of a self-subsisting subjectivity derives from simple disinterest and disregard for the claims of the natural sciences. Perhaps these ways of doing philosophy persist due to their capacity for producing felt moments of seeming enlightenment. Or perhaps it is the appeal of a continued commitment to some form of quasi-idealism, perhaps now cast in terms of Freudian categories. Looking ahead to the account of Ihde's pragmatism, it is worth noting that many phenomenologists and specialists in what has come to be called Continental philosophy philosophize in a tradition that has much more in common with Schelling than with Russell or Quine. But Ihde takes pains to dissociate himself from that tradition.

Peirce, James, and Dewey were all sensitive to problems that lay ahead for anyone who attempts a thoroughgoing materialism, not the least of which being that none of them had any interest in defending a view that would commit them to the unreality of consciousness or felt experience. They viewed conscious life as part and parcel of the natural world, and (consistent with what has already been said) as an expression of organism/environment interactions that characterize all living things. The focus on habit opened a philosophical strategy. Normal or typical perceptual habits organize experience as being in a world of things that exist beyond our immediate ability to see, hear, touch, taste, and smell them. The sheer functionality of these habits is a good enough reason to continue relying upon them, though *not* to place them beyond all reasonable doubt. The natural sciences themselves are, in one sense, further cultivated and habituated means of acting that likewise derive a limited warrant from their functionality. Natural science does not attain a god-like status that simply must be accepted for pragmatists, who are quite willing to question both the accuracy and the functionality of a scientific doctrine when some countervailing consideration recommends doing so. But pragmatists also feel no particular need to challenge the doctrines and dicta of science with sham doubts or tests requiring more certainty than is possible for time-, space-, and culture-bound intellects.

This naturalism allowed Peirce, James, and Dewey to adapt Darwinian thinking in the non-reductionist style sketched above in connection with Dewey's views on multiple platforms, each supporting evolutionary change in the content of both individual and social experience. Change was always occurring in the habits and routines supported on genetic, neural, cognitive, social, and cultural platforms. Some habits were being reproduced by neural processes (including but not limited to memory), some by social institutions, or by formal activities such as education,

but others were falling by the wayside. This constant change was in some sense directional (if not fully normative) without requiring teleology or intentional consciousness on the one hand, or the dialectical tropes that had been invented to account for developmental growth in German idealism, on the other. At the same time, pragmatists were able to incorporate some elements of idealism as mechanisms that actually account for reproduction and selection. My discussion of platforms for evolutionary process opens the door to a kind of ontological pluralism that tracks some elements in idealism that were characterized in terms of *aufheben*. Thus, once genes reproduce organisms with brains, there is an opportunity for an ontologically novel type of evolution to emerge in the reproduction/selection processes of neural development and learning. Once brains evolve to include capabilities for language and memory, more complex types of learning enable the reproduction of social habits or institutions. With advanced cultural forms (like universities, legal systems, or "the art world") there develops yet a new way in which institutionalized practice can "be" or subsist, which is to say, be reproduced. And as a form that must be reproduced to subsist, disciplinary knowledge, the law and art are subject to selection pressures that reshape their characteristic institutions. Changes in disciplinary, legal, or artistic practice can be minor, but they can also be dramatic enough to alter the reproductive mechanisms of these social institutions. Entire genres can disappear simply in virtue of failing to be reproduced from one generation or interval to the next, and indeed, the entire institutional form is at least theoretically vulnerable to extinction. Thus some dialectical tropes were reconciled with Darwinian evolutionary mechanisms and stripped of their metaphysically spiritualist dimensions. It is too simple to say that this is what first generation pragmatic naturalism comes to, but given the constraint of word limits and reader patience it must serve for the purposes at hand (see Cahoon, 2013 for an extended argument).

It is worth taking some pains to compare pragmatist thought with phenomenology here. Husserl's accounts of the natural attitude and the lifeworld share a great deal with the pragmatists' accounts of experience. Like the pragmatists, he argued that philosophy should be cognizant of the naive realism implicit within the natural attitude while recognizing that our very ability to undertake philosophical reflection depends on the affordances of this attitude. Yet Husserl was also given to episodes—the *Cartesian Meditations* and the studies of internal time consciousness (i.e., our felt or experienced sense of time)—where he is anything but reliant on the habitus of the natural attitude. In these moments he seems very much the conventional idealist. Although both Husserl and Heidegger expressed some hope of philosophizing in a manner that was consistent with science, it is worth pointing out that German biologists of their era were reacting against increasingly mechanistic forms of early Darwinism. Ernst Haeckel (1834–1919) supported a Lamarckian theory of evolution, while Hans Driesch (1857–1941) was promulgating his theory of entelechy. In the interval between the two world wars, "being scientific" did not necessarily mean thinking in terms of natural selection for philosophers working in the German speaking world.

The biologist who might have brought Husserl and Heidegger closest to the organism/environment unity so influential for early pragmatism was Jakob von

Uexküll (1864–1944). Von Uexküll developed a biological theory of the *Umwelt* that emphasized how the particular sensory capabilities of different organisms structured their respective activity within their respective natural habitats. *Umwelt* is alternatively translated as “environment” or “surrounding world.” As theorized by von Uexküll, an animal’s *Umwelt* yields its peculiar form of subjectivity, which should be seen as distinct from the creature’s *Umgebung*—its environment as seen from the perspective of the observing scientist (von Uexküll, 2010). The *Umwelt* is characterized by both self-oriented and outwardly-oriented features, a structure that Husserl (and Ihde) would theorize in terms of *noesis* and *noema*. But there are moments in von Uexküll’s texts where one sees the dialectic of these moments as a development of Schelling’s idealism, in which subjectivity is the ultimate reality. The *Umwelt* received a discussion of some length from Heidegger, who uses von Uexküll’s work to support his famous declaration that animals are “poor in world” (Heidegger, 1995, pp. 261–67).

It would be tendentious to accuse either Heidegger or von Uexküll of lingering idealism (though Nicolai Hartmann did just that (Peterson, 2012)). Nevertheless, this take on organism/environment not only lays excessive emphasis on the subject’s expressive drives, it also neglects the role of evolutionary mechanisms that figure heavily in pragmatist views on analogous topics. For the naturalist, *Umwelt* is a product of multiple platforms (genes, sensory-motor organization, memory, and, for some species, social institutions [including language]) that reproduce those patterns characterizing the felt environment of any given species. Species differ because the constellation of habits, affordances, and drives that constitute their particular *Umwelt* survived—they *continued* to be reproduced in potentially hostile natural environments where predation, climatic shifts and other biological hazards might have ended them.

4.5 And Finally, Ihde

The organizing thesis of this paper is that Ihde shares several doctrinal commitments with first generation pragmatists, despite having never explicitly articulated them. The significance of this thesis is that many philosophers working in the so-called Continental tradition do not. Neither claim is easy to defend based on textual sources, and hence this concluding section of the chapter may not convince readers that bring an antagonistic attitude. If Ihde is a pragmatic naturalist, the remarks that have already been made in the preceding section are sufficient to distinguish his philosophy from that of Heideggarians and postmodernists who are closet idealists. Only slightly less decisively, a pragmatic naturalist is going to differ from someone whose philosophical work has been shaped by intellectual or emotional resistance to the cultural institutionalization of philosophical naturalism within the natural sciences. Someone whose philosophical thinking issues from resentment toward or suspicion of the technological achievements so closely tied to the natural sciences may also find naturalism repellant, without necessarily feeling the need to articulate

an explicitly antagonistic metaphysical position. Certainly at least some of Ihde's contemporaries have been attracted to phenomenology, existentialism, and post-modernism from these anti-science orientations.

I contend that little resistance, suspicion, or repulsion toward the natural sciences is found in Ihde's writings. Claims of absence, of course, do not lend themselves to direct textual support: no list of quotations can be summoned. A positive statement in support of the natural sciences can be found in *Husserl's Missing Technologies*, where Ihde argues that Dewey's naturalism is precisely what needs to be added to Husserl's phenomenological approach to consciousness (Ihde, 2016, p. 97). In his best known work, Ihde tends to approach all forms of technology, from the craft techniques of Pacific Islanders to advanced robotics and computerization, with a zest for understanding what they do. This does not make him into a mindless booster of technology, but in his critique of Heidegger's "romanticism," he distances himself from philosophical positions committed to any broadly based opposition to the naturalistic commitments that have been socially institutionalized in the natural sciences (Ihde, 2010). Note that in stressing the social institutionalization of naturalist philosophy I am also taking a characteristically pragmatist orientation to what matters here. It is not so much a matter of what natural scientists think, nor does the matter at hand hang on the claim that modern technology is the product of physics, chemistry, and biology, understood as scientific fields of study. Ihde has argued explicitly *against* the claim that theory precedes technology in either a historical or ontological sense (Ihde, 1983). Since this is the case, it would be irrational for him to bear a grudge against the sciences on the basis of fear or repulsion concerning tools and techniques which he has asserted they do not produce!

As noted above, pragmatic naturalism is as distinct from materialist metaphysics as it is from idealistic spiritualism. One key to this is a commitment to the reality of percepts. Pragmatists have no difficulty in talking about every aspect of experience as real and no reason to find reductive explanations of phenomenal experience or cognition attractive. Rather than proposing alternative modes of substance to support cognitive and material realities, pragmatists just refer to all of them as natural. Here, too, Ihde is largely silent on this doctrine. None of his writings make reductionist arguments, but he makes no extended counterarguments to reductionism, either. Ihde writes, "And in my reading of Dewey's naturalization directions, taken in a modified form from Darwin, I see no strong hint of naturalistic reductionism anywhere, although with some of his analytic followers it is precisely a naturalizing reductionism that obtains" (Ihde, 2016, p. 101). In addition, the frank manner in which Ihde discusses perceptual experience, and especially auditory phenomena, is much closer to the pluralist outlook of first generation pragmatists than it would be to any kind of reductionist materialism. If nothing more, Ihde's writings conform to the spirit of pragmatic naturalism.

However, more can be said by referring again to *Husserl's Missing Technologies*, which is helpful if not altogether decisive. At a crucial point in Chap. 6 ("Adding Pragmatism to Phenomenology"), Ihde singles out Dewey's understanding of experience to distinguish first gen pragmatism from that of linguistic pragmatists, which, for Ihde, include Rorty, especially given Rorty's commitment to a coherence theory

of truth. Ihde quotes a passage from *Experience and Nature* where Dewey critiques the prevailing tendency of post-Cartesian philosophers to identify experience with sense impressions, "set over against nature, which consists wholly of physical objects" (Dewey, 1929, p. 11). In Ihde's words,

Dewey restored a robust notion of "naturalized" experience in which its context and relationships are reestablished, both undercutting and escaping early modern epistemology. But—this is also exactly what Husserl did with the notion of intentionality and his multidimensional, actional notion of experience. The implications of this robust notion of experience, however, only began to be clear in the later Husserl and more prominently in Merleau-Ponty. And those implications are what I shall call *whole body experience* with the full panoply of actional perception. (Ihde, 2016, p. 110)

In short, the biotic approach to experience found in pragmatic Deweyan naturalism illuminates important implicit features of Husserl's thought, which come to fruition in Ihde's postphenomenology.

Establishing Ihde's connection to pragmatist epistemology is a more complicated task. I cannot recall any passages in Ihde's better-known writings, other than the passage quoted above, that makes more than a passing reference to epistemology. One might be tempted to conclude that he has made no contributions to this philosophical subfield. Contrarily, however, I would argue that virtually all of Ihde's work is a form of epistemology, though admittedly not a form of epistemology that jibes well with twentieth century analytic philosophy. Ihde does not offer lengthy discussions on what it means to *know* or *believe* something, truth, or the criteria for epistemic warrant or correctness. There is, to be sure, a sense in which Ihde's writings might (like most phenomenology) fit comfortably in a suitably broadened understanding of the philosophy of mind. Yet Ihde's focus on instrumentation and on the role that tools and techniques play in shaping our access to and understanding of the world frequently engage philosophical consideration of perception in a manner that is much more reminiscent of late modern empiricists than it is of twentieth century analytic philosophers who have developed theories of consciousness or mentality.

In contrast to an epistemology that lays all of its chips on the propositional form, first generation pragmatists followed empiricism in emphasizing perception. This move effectively aligns them closely with phenomenology. James J. Gibson (1904–1979) later coined the term "affordance" to indicate features of perceptual experience that communicate opportunities to act in one way rather than another. Gibson's connections to pragmatism and phenomenology must be left undeveloped in the present context, but his notion that perception is rich with affordances coheres well with the first generation pragmatists approach to belief. Beliefs are dispositions to act, and Gibson claimed that perception is structured so as to dispose us to act in certain ways. Affordances are elements of the perceptual field, and they dispose the organism without the need for either behavioral conditioning or conceptual (which is to say, linguistic) contributions (Gibson, 1979). If one is a pragmatist in the sense that Peirce, James, or Dewey were, this claim is epistemological as much or more than it is psychological. It would be possible (though beyond the present scope) to reconstruct much of James and Dewey in the language of affordances. Indeed,

Gibson himself makes frequent reference to James in *The Ecological Approach to Visual Perception* (Gibson, 1979).

Regardless of whether phenomenology itself should be reconstructed in a Gibsonian vein, there are clear connections to Merleau-Ponty's work on the body schema. Unlike a Kantian schema, which imposes a *conceptual* structure on raw experience, the body itself orients perception and simultaneously affords action of a specific sort. This element of Merleau-Ponty's philosophy is taken up by Ihde in his extensive writings on embodiment. For both Merleau-Ponty and Ihde, embodiment resides at the core of epistemology. Creatures with different bodies are going to be disposed differently, which is to say they will have different beliefs, entirely independent from the contribution made by concepts (Welton, 2006). What Ihde contributes most explicitly is an adaptation and considerable broadening of Heidegger's work on readiness-to-hand and presence-at-hand. Understood as an epistemological claim, this is a fairly straightforward adaptation of the pragmatist move from representationalism to a dispositional account of belief or knowledge. Presence-at-hand implies a disengaged Cartesian subject standing apart from the world and casting a gaze upon it. Beliefs mirror, image or represent this world-at-a-distance through a medium that early empiricists will characterize as ideas, and later as propositions. But in being dispositionally inclined or poised to act, many aspects of the material world (our tools) become incorporated into the noetic moment of intentionality: they become ready-to-hand. As bodies-in-technology, our percepts exhibit affordances that reflect the way that we are technologically environed in highly significant ways (Ihde, 2002). In making these moves, Ihde is drawing upon a pragmatist doctrine of dispositional epistemology, but expanding it with a sophisticated account of the way that technology transforms the ontological character (e.g., the affordances) of the human organism.

Other chapters in this volume examine some of these aspects of Ihde's work in much more detail, but here let me highlight two key points. The first point to notice in reference to pragmatism is that embodiment itself is going to be understood as a key element of epistemology. It is the pragmatist's dispositional orientation to belief that brings this element of theory into epistemology, while it is the first generation pragmatist view of the role of perception in forming dispositions that provides the links to both Gibson and Merleau-Ponty. One might interpret this role in a "purely psychological" manner. That is, one might take Gibson's or even Merleau-Ponty's work on the formation of percepts as a dutiful counter to extreme versions of psychological behaviorism, yet fail to see any strong connection to the epistemologist's traditional interest in theorizing the nature or foundations of knowledge. However, the pragmatist account of knowledge as settled (and warranted) disposition to act pulls the cognitive and biophysical processes that constitute perception back into epistemology. One cannot have a pragmatist account of knowledge without also having some account of the knowing organism.

Second, Ihde's elucidation of how technologies interpenetrate embodiment actually brings the notion of affordance much more closely in line with the views of first gen pragmatism (especially Dewey) than would be expected from Merleau-Ponty's phenomenology of perception or Gibson's ecological theory. The phrase "bodies-

in-technology" conveys the pragmatists' sense of an always environed organism (usually, but not always, a human being) that is "situated" in the sense of being poised to acknowledge and respond to *some* potential stimuli in its surrounding world while ignoring others. For both Merleau-Ponty and Gibson, the emphasis is on the way that body structure (binocular vision, bipedal locomotion, etc.) determines key aspects of this situatedness. While neither would deny that tools and techniques augment and alter one's bodily poise, it is Ihde who really emphasizes the way that one's equipment mediates the organism/environment interaction—at least for humans, but quite plausibly for other tool-using species, as well.

This aspect of Ihde's work appears quite early in his studies on instrumentation. *Technics and Praxis* (1979) offers what might be reinterpreted as a theory of technological affordance using philosophical concepts adapted from Husserl's phenomenology. In expositing this theory, I will coin some terminology that I take to be more consistent with postphenomenology. One can be a body-in-technology *noetically* when instruments recede into one's body schema. They become "transparent" in the sense that one is not really even aware that one is using them. Ihde is here inspired by Heidegger's discussion of the ready-to-handedness of the hammer in use. But unlike Heidegger, Ihde's interest is to characterize the *affordance* of the tool-in-use. Using the example of the dental probe, he points out how certain aspects of the body's affordances are amplified, while others are reduced. The dental probe heightens the perceptibility of a tooth's texture and hardness, while it dampens perceptibility of temperature or dampness that would have been afforded by probing the tooth with a finger (Ihde, 1979, pp. 18–20).

In other cases, the tool is "out there" in the environment and the relation is *noematic*. Many classic instruments have this feature: the dinner bell, the alarm on a timer, or the warning whistle of a steam boiler. Here, Ihde sounds quite Deweyan in stressing how these devices are elements of the environment to which we are attuned: their meaningfulness is a reflection of our attunement. However, Ihde goes on to discuss the hermeneutic structure of bodies-in-technology in these cases. The instruments are mediating—literally standing in for—phenomena that are of interest to the organism (now seemingly always a human being) but that would otherwise remain obscure or hidden. The environment is brought closer in these cases, an affordance that transforms the organism/environment interaction by transforming things in the world. Such hermeneutic relationships arguably involve conceptual elements as well as bodily capabilities. Nonetheless, it is helpful and entirely consistent with Ihde's intentions (both in 1979 and in the era of postphenomenology) to understand these hermeneutic relationships elucidating and expanding the epistemological implications of James's and Dewey's work on perception, disposition, and belief.

In sum, the pragmatists' ontological pluralism allows for habituation to evolve in multiple ways. Not all of them will involve technology, though in an age of genetic engineering even this may be changing. Ihde's postphenomenology allows us to see how rather basic perceptual habits evolve differently when instruments are part of an organism's environment. The neural network may well be the platform on which habits evolve, but as Andy Clark and David Chalmers have argued with the extended

mind hypothesis, the accoutrements with which we are equipped will shape which habits evolve in significant ways (Clark & Chalmers, 1998). Perceptions translate to concepts and culture. Ihde's phenomenology of technical instruments documents the results of such neural evolutions, but postphenomenology acknowledges how tools and techniques shape social institutions, as well.

4.6 Conclusion

Is Ihde a pragmatist? Both Carl Mitcham (1994, pp. 76–79; Mitcham, 2006) and Larry Hickman (2008) have said that he is. Both of them argue from the claim that pragmatism takes an instrumentalist view of knowledge and belief. That is, beliefs and knowledge claims are taken to be tools for achieving an individual or group's immediate goals, what Dewey would have called "ends in view" (Dewey, 1922, pp. 223–237). The goal-oriented account of beliefs suggests that knowledge (i.e., warranted belief) already *is* a form of technology. From this starting point, Ihde's phenomenological philosophy of technology is a relatively straightforward augmentation of pragmatism that emphasizes how tools and techniques amplify or dampen bodily affordances in pursuit of a given end-in-view. Ihde himself appears to endorse this reading of his work in *Husserl's Missing Technologies* (Ihde, 2016, p. 104). Readers whose interest has been piqued by this chapter will benefit from consulting these additional sources.

However, I hope to have accomplished several things that take Ihde's pragmatism beyond the Ihde-Mitcham-Hickman conversation. In the first instance, whether or not one wants to defend an instrumentalist account of knowledge and belief, one must take more care to dissociate pragmatist epistemology from the view that being pragmatic is simply equating truth with whatever happens to help us achieve our goals. Mitcham may be assuming that his readers know this already, but this very basic point belies any simple equivalence between knowledge and technology. Hickman makes it clear that for Dewey an inquiry becomes truly useful only when ends-in-view are themselves subjected to critical scrutiny and reflective evaluation (Hickman, 1990). Neither Ihde nor any other philosophical pragmatist should be read as being committed to the view that equates truth with "whatever works."

More substantively, I have discussed some characteristically pragmatist doctrines that seem entirely consistent with the larger thrust of Ihde's thought. One cluster of ideas emphasizes how classical pragmatists developed a Darwinian organism/environment epistemology that is inclusive of both percepts and concepts, while another cluster includes ontological commitments that situate the phenomena phenomenology describes naturalistically. The elements I have stressed also mark out ways in which the thought of Peirce, James, and Dewey differs from that of later linguistic pragmatists, on the one hand, and from more idealistic, anti-naturalist versions of phenomenology and postmodernism, on the other. Whatever objections might be raised against stressing the pragmatist elements in Ihde's thought, he is neither an analytic philosopher of language nor an anti-naturalist. Ihde's references

to Dewey and Rorty in *Husserl's Missing Technologies* are consistent with the picture I have been painting. Getting some purchase on the way that first generation pragmatists offered a pathway between these two unacceptable philosophical alternatives is thus worthwhile, I would argue, and provides a plausible way to interpret postphenomenology.

The amendments that this chapter has made to Ihde's pragmatism enrich our reading of his contributions to philosophy. Early twentieth century philosophers in Germany and France struggled against what they took to be reductionist, mechanistic, and even vulgar materialist tendencies in Darwin, the utilitarians, and even the pragmatists. But in the decades after World War II, the indirect and often obscure terminology of phenomenology and postmodernism served as a redoubt for practitioners of the humanities who might have been targeted by McCarthyites, Birchers, and other right-wing zealots hoping trim the budget of philosophy departments at American universities. Internal politics of these same universities pitted faculty in the humanities disciplines against the biophysical sciences and engineering departments, leading to developments in what we call "Continental philosophy" that have warped philosophical positions that were originally formulated in opposition to materialism into anti-science metatheories. During the same decades that left-leaning one-time Marxist-Freudian European-influenced intellectuals were encoding their views in post-structuralism, most American philosophy departments were retreating to "the icy slopes of logic"—to a form of apolitical, aseptic linguistic analysis (Reisch, 2005). Ihde has never been part of either trend.

When first generation pragmatists spoke of experience, they were referring to an embodied form of being, of being environed, of being in the world, but this latter turn transformed key doctrines in pragmatist philosophy by stripping the thought of Peirce, James, and Dewey of its biological and perceptual orientation. With this narrowing of the pragmatist frame of reference, philosophers in Ihde's and succeeding generation have been slow to affiliate with pragmatist thought, or to avail themselves of the situated dispositional elements in pragmatist epistemology. Lacking these explicit connections, it is somewhat difficult to see how Ihde's work is itself situated in the long history of epistemology. Attentiveness to the pragmatist leanings in his thought not only helps restore a more engaged and robust way of thinking about knowledge production, it also facilitates the integration of Ihde's important innovations—his theory of technological affordances—into epistemology and philosophy of science.

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