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Virtual existence and its ambiguities: how postphenomenology of technology clarifies our situation in a digital world.

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Virtual Existence and its Ambiguities:

How Postphenomenology of Technology Clarifies Our Situation in a Digital World.

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Introduction

Experiencing life in contemporary western society where computers and smartphones dominate the day-to-day lives of everyone around us always runs the risk of becoming an unexamined fact of the world itself. Besides encountering the occasional incompetent family member or neo-Luddite, familiarity with new types of digital technology, like new apps, games, and hardware, seems universal. Certainly not all communities, even in the western capitalist world, have access to these technologies, as financial constraints and cultural differences can discourage the prevalence of digital devices. Even so, evaluating the social and material impacts of digital technology seems to be becoming a genre of literature all in itself, even if that only applies to a subset of society. Many arguments have been made about the use of screen technologies and how they are perceived and interacted with by individuals.[1] A large public discussion has formed around the understanding of these topics that highlights the influence technology has on its users.[2] However, phenomenological thinking regarding computers and smartphones is useful to uncover some overlooked aspects of digital technologies and how such aspects might affect how the user's experience. Moreover, the way technologies are incorporated

[1] James Bridle, *New Dark Age: Technology, Knowledge and the End of the Future*, (London: Verso Books, 2018).
[2] Tristan Harris, "How Technology Hijacks People's Minds - from a Magician and Google's Design Ethicist," *Tristan Harris*.com, May 19, 2016, http://www.tristanharris.com/2016/05/how-technology-hijacks-peoples-minds-from-a-magician-and-googles-design-ethicist/.; Anil Dash, "12 Things Everyone Should Understand About Tech," *Anil Dash*.com, April 7, 2018, https://anildash.com/2018/04/07/12-things-everyone-should-understand-about-tech/.; Chris Bailey, "Your Smartphone Is Chopping Your Life into Tiny, Less Meaningful Pieces," *A Life of Productivity*.com, August 14, 2018, https://alifeofproductivity.com/smartphone-is-making-your-life-less-meaningful/.; Ezra Klein and Cal Newport, "Cal Newport on Doing Deep Work and Escaping Social Media," April 18, 2017, in *The Ezra Klein Show*, produced by Vox, podcast, MP3 audio, 1:20:18, https://player.fm/series/the-ezra-klein-show/cal-newport-on-doing-deep-work-and-escaping-social-media.
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into one's life changes that life. Transformation of a lifestyle is always complex and can (whether intended or not) occur in many different ways with different outcomes and effects.

Without becoming too abstract and removed from the direct experiences of living with these technologies, the goal of this paper is to highlight some overlooked aspects of the experiences with screen-based digital technologies that are prevalent in the western world. Because functioning in the civil and social realms involves a large amount of dealing with computer applications and internet resources that are accessible with both smartphone and computers, I have chosen not to examine just a singular piece of equipment but instead to examine devices and features that are all part of the computer-based technology. There are many similarities between them: they often use application and 'window' based screen navigation, they are often manipulated with virtual 'buttons' and use scrolling as another form of 'movement', sounds often function as an indication of something accomplished or a prompt for action, and the list goes on. While it would be impossible to discuss the totality of things experienced with these technologies (much as completely dividing up experience in general is impossible), some common features like the ones stated above can have transformational effects on how I experience the world. The use of smartphones and digital computers is a complex topic that needs an analysis on its own terms, and this paper fulfills that need.

We know that our use of technologies has changed the way we interact with the world (we often use digital maps instead of paper ones) and each other (we often spend time on social media), but the character of these relations remains ambiguous. How our technology-enhanced lives operate creates an existential transformation of ourselves as subjects.[3] In this paper, I will

[3] Peter-Paul Verbeek, "Postphenomenology of Technology," in *Philosophy of Technology, The Technological Condition: An Anthology*, 2nd edition, eds. Robert C. Scharff and Val Dusek (West Sussex: John Wiley and Sons, 2014), 567, 571. Phenomenology has a history of being studied alongside existential philosophies. For technology,

trace the roots of postphenomenology and defend it as a useful framework for thinking about digital technologies. Within this framework, I will expand on previous postphenomenological studies to show how digital devices are often both acted *through* like tools and *towards* like texts.[4] Postphenomenological description is philosophically important if it makes explicit some qualities of experience that may be overlooked, and this paper follows the purpose of postphenomenology in this regard.

First, an understanding of some essential works of phenomenology and its challenges from postmodernist thinkers will help set the grounding for the discussion of how these technologies are important to look at firsthand. Secondly, the project of postphenomenology of technology will be defended as a useful framework for evaluating digital technologies. Finally, thinking about these technologies will yield some consequences about how to understand the integration of pervasive digital computer technologies into our everyday lives.

Phenomenology and the Digital Life

In any given day, the use of screen-based computer technologies is nearly continuous in navigating the activities and tasks of everyday life. To use a personal example, before noon on an average day, I have awoken to an alarm on my smartphone, communicated with various friends and family via social media apps like Facebook and Reddit, accessed my college's online portal in order to check my grades and assignments, transferred money through a banking app, and printed an assignment through the use of a school-owned computer. I have also purchased a book and am even writing this paper through a word processing program that allows me to 'sync' it for

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the former examines the human/world for meaning that is disclosed to consciousness or perception, whereas the latter examines the relationship for the elements which disclose how humans meaningfully engage with their world.

[4] The postphenomenological terms "embodiment" and "hermeneutic" correspond to these kinds of relations, but they are introduced later.

extra availability and access from any other computer connected to the internet. These technologies populate the lived world, but is this merely an improvement on the ways we accomplish our personal goals, or does the use of these artifacts[5] alter our understanding of how to navigate the world? In other words, are these devices neutral in their impact on how we understand the world and our place in it?

How goods are obtained, how individuals and institutions communicate, and the proliferation of online media is important from an existential perspective, because these things compose the way in which lives are conducted. The activities individuals engage in have formative roles in their perceptions of themselves and their individual worlds. The unintended actions performed out of habit, for example, had to have once been new. Another way that our activities change our senses of self is through empirical testing of our abilities. Once I understand that I can walk, then the whole 'world of walkable places' opens up. Interestingly, nothing about other people's experiences per se has to change for this new world to become accessible to me; my ability to walk changes my sense of my own capabilities, which in turn alter my range of options of what to do and what experiences I can have. Thus, if what I am capable of doing is part of my process of interpreting the world, the world itself has a different meaning. If I am unable to walk and am presented with a situation that requires walking (like the use of a treadmill), the situation is one to which I must respond differently. In this way, I understand myself differently depending the experiences that I have in the world, which themselves depend on how I perceive my capabilities.

If the primary structure of what is meaningful is based in experience, technologies that compose a large percentage of my experiences are especially important, since these devices are

[5] Artifact is the word I have chosen to use when referencing a specific piece of technology to which I relate (and use).

different from my biological body in some way (even if that is just in the amount of time I have spent with each). When I spend 10 hours of my day working on my online coursework, that takes up a large percentage of how I exercise my capabilities (via the technology) during the day and connects it to the meaning-making process described above. Thus, it is because so much cultural and personal time and effort is invested into these experiences that they are properly identified as important variables of what navigating the world "is like." With the exception of strict determinist accounts of technological progress, the impact of these artifacts largely depends on how they are used, and this contingent interaction is overlooked by empirical studies.[6] I will next continue this line of inquiry as it applies to the digital artifacts that surround my experiences of the world.

The project of phenomenology is one that employs the rigorous description of experience as a key to understanding the mind's impact on the structure of understanding concepts. This project was inseminated by Edmund Husserl's work, and one of his most important concepts is the intentional correlation between noesis and noema. Firstly, this means that consciousness is always "of something." It never exists on its own terms but is composed of both the direction of consciousness (noesis) the objects and world (noema) which manifest in experience. There is no "pure" consciousness because describing this would entail describing what appears to consciousness, but there is a way in which the objects of consciousness (noema) are 'intended' towards, which is the noetic quality. Understanding consciousness in this way demonstrates a related point. Experiences, meaning the most immediate elements of what 'is', are subjectively undeniable. I might not know if I am dreaming or not, Descartes points out, but I know that I am something as something is having this experience. Because consciousness is

[6] Verbeek, "Postphenomenology," 562.

always intentional (consisting of something), it is identical with experiencing.[7] Therein, the starting point of phenomenology is not to address the issues of hidden drives or objective beings, and these are set aside and 'bracketed'.[8] Given this, the relationship between the world and its objects (noema) and the 'area' of experience (which has its grounding in the body as well; the noesis) is actually a correlation. The implications of such is that changes in either affect the other. Right away, this point connects to technology, because the world populated by technological experiences is a world which is inhabited by different objects of our conscious experience, which is a different consciousness. Some of those objects are front and center in our experience—like the plot of the story I am reading—but others are present as 'relief' to make the experience function normally, as I cannot focus on every experience at once. Some examples would be the chair I sit in, the computer screen I stare at, and my habitual capacity to scroll down the page when I'm finished with this screen's contents. My exposure to various objects then becomes part of the general way in which I understand the world at large. For example, the constant access to photos and simple editing software facilitates the proliferation of memes and 'meme culture'. Becoming familiar with this format and some of its common iterations results in individuals that have these memes as a referential context of interpreting the world. However, to an older generation, memes may seem like poorly done Photoshop images and not ways in which to understand the world. Another, less obvious example is in the nature of screen-based artifacts themselves, which often function in the background. The edges of the screen often point towards ways to access a different display, often instantaneously. My familiarity with this way of experiencing text (via websites or word processing programs) makes me someone whose concept

[7] If a thing is not conscious for me, then I cannot experience it (cannot even speak of it), and if it is not experienced, then I cannot be present to consciousness.
[8] Edmund Husserl, "Pure Phenomenology, its Method, and its Field of Investigation," in *The Phenomenology Reader*, eds. Dermot Moran and Timothy Mooney, 124-133 (New York: Routledge, 2002).

of what a text can be is expanding to mean different things than for someone who has not experienced text through screen-based technology. These examples show how phenomenology starts from the experiences understood by living in the world (lifeworld) instead of some pretense of objective or abstract discourse, as this 'lifeworld' as it is experienced cannot be chopped up and quantified in the way objectivity would require.[9]

Heidegger's Essence of Technology

A return to some classic texts of phenomenology is helpful for reorienting the discussion around this lived experience. A foundational work in the existential phenomenology of technology is *The Question Concerning Technology*, by Martin Heidegger. In this work, he discusses the supposed essence of technology. By starting with the overall goal of uncovering technology's essence, Heidegger's conclusions pertain to the principles behind the operation of many technological artifacts. Importantly, this is in contrast to views that isolate certain technological tools themselves from a larger context of use, assuming that they are neutral in their effects. Instead, he connects themes and ideas that manifest in how technology feels integrated into the lives of many people. While Heidegger's arguments have been criticized by many, this essay has a crucial role in the development of the philosophy of technology, and many of the arguments in it continue to bring up relevant points.

Technology, for Heidegger, is an example of a more fundamental disposition towards the world. He states that "Everywhere we remain unfree and chained to technology, whether we passionately affirm or deny it. But we are delivered over to it in the worst possible way when we

[9] Edmund Husserl, "The Way into Phenomenological Transcendental Philosophy by Inquiring back from the Pregiven Life-World," in *The Phenomenology Reader*, eds. Dermot Moran and Timothy Mooney, 151-174 (New York: Routledge, 2002).

regard it as something neutral…"[10] He subsequently examines two common conceptions of technology: as a means to an end (the instrumental) and as a human activity (the anthropological).[11] While he considers both to be correct, they do not sufficiently relay what the "instrumental" is itself; they are not 'true' in the sense of depicting technology's character in the most accurate way. Heidegger is questioning the governing principle behind technology, and he returns to the post-Aristotelian conception of cause as comprising four distinct versions: the material (what something is made of), formal (the organization or shape of material that distinguishes it from other objects), efficient (the process and agent which transforms the object), and final causes (the goal or telos). Reimagining cause as 'how something comes about' allows him to discuss the nature of instrumentation, which is this 'bringing-forth' (facilitating something). Heidegger is abstracting 'backward' from specific technologies into more general categories in order to encompass all forms of technology and reach its essence.

Technology in its instrumental capacity is a way of 'revealing', which Heidegger takes to mean a process of casting the world in a certain light, which makes the world a place to do specific kinds of things. The instrumental is a specific kind of revealing, because to facilitate something (this is what instrumental is effectively doing) requires some basis in knowing the character of the world. Revealing is linked to the idea of knowledge, for that which facilitates ability requires familiarity with its different aspects, and conversely, the facilitation itself establishes itself into the world as something which can be done.[12] In other words, what is possible is inseparable from what one knows how to do. In this way, technology is a process that

[10] Martin Heidegger, "The Question Concerning Technology." in *Philosophy of Technology, The Technological Condition: An Anthology*, 2nd edition, eds. Robert C. Scharff and Val Dusek (West Sussex: John Wiley and Sons, 2014), 305.
[11] Ibid.
[12] Ibid., 308.

discloses[13] some truth about the world. It is never *the* truth because Heidegger views the world as something that can be revealed in many different ways.[14] The technological mode of revealing the world has specific ways that it approaches the world, and these will be what Heidegger tries to identify.

Heidegger distinguishes modern technology (for him, industrial artifacts like hydroelectric dams) from artisans' tools (like a paintbrush or a hammer). The kind of revealing that the large industrial technologies facilitate is that which turns nature, or what is given, into stockpiles of resources to be made available for later use.[15] Technology is a way of appropriating the world for human use. Once the world that is non-human (constructed for the purpose of understanding) is appropriated into intelligibility through technology, the world that is left is one without mystery and can be ordered for use whenever it is needed. Heidegger views this essence of technology as 'enframing' or ordering the world by means of 'unconcealment'. Ordering presents a danger to the freedom of humans in that it places everything nonhuman into those stockpiles able to be called forth upon the request of humans.[16] Freedom comes from being able to engage with the world in meaningful ways and placing the world into terms of 'standing reserve' transforms all objects into subjective capabilities which limit other types of engagements. For example, constant access to the alarm clock and calendar features of a smartphone takes all the time in a day and makes us accountable for each hour, as we are always aware of the time and can have the clock notify us whenever we 'set' it. The way knowledge contains a claim about the function of itself (what the knowledge or ability is for) then comes to

[13] "Disclose" is here meant to describe both the affirmation that there is a world and the way we come to know its character. The correlation between noesis and noema helps in thinking about this statement because there is no perception without there being something perceived. To disclose the character of the world is to position myself in relation to it is a specific manner.
[14] This is also why he returns to an Aristotelian four-fold causality.
[15] Ibid., 309.
[16] Ibid., 316.

dictate the actions of the individual by circumscribing the freedom to interact with the world in new ways. In the alarm clock example, being responsible for all of my time and punctuality forces me to interact with the world in this way, with time now placed into 'standing-reserve'. Ultimately, Heidegger offers a hopeful solution to this dilemma: the capacity for growth on the individual level as well as the species level hinges upon the continued acknowledgement of this unfolding essence and a critical view of technology as opposed to an infatuation with it, or worse, viewing it only as instrumental.

Heidegger's historical view has been critiqued by subsequent philosophers in the way it generalizes not only about technological artifacts, but also implies some inherent relationship that humans have with them.[17] While the way modern technology orders the world is important, and while it may stem from some more fundamental trend, this fundamental trend can itself be subject to change. Modern technology is not a variation on one specific way of approaching the world but a multifaceted, expanding notion that encompasses many distinct relationships, and these do not all belong to the same 'essence'. For example, the mechanistic role of an oil rig would fit well into Heidegger's essence, but the creative role of Photoshop (a product of modern technology) does not seem to work as enframing in that it encourages the creation of new kinds of images. Photoshop is manipulative of the world, but its role seems mischaracterized by saying that it is always involved with placing things into 'standing-reserve'. On the contrary, Photoshop seems to be working towards the proliferation of wonder in its ability to create virtually any type of image. Photoshop could *sometimes* function as an enframing (i.e. if I only ever use its features

[17] Cf. Don Ihde, *Technics and Praxis* (Dordrecht: D. Reidel Publishing Company, 1979); Don Ihde, "Heidegger on Technology: One Size Fits All," *Philosophy Today* 54, no. Supplement (2010): 101-05; Verbeek, "Postphenomenology"; Galit Wellner, "The Quasi-face of the Cell Phone: Rethinking Alterity and Screens," *Human Studies* 37, no. 3 (2014): 299-316; Asle H. Kiran, "Four Dimensions of Technological Mediation," in *Postphenomenological Investigations: Essays on Human/Technology Relations*, eds. Robert Rosenberger and Peter-Paul Verbeek, (Lanham: Lexington Books, 2015), 123-40.

for marketing purposes or in constructing diagrams for functional purposes), but saying that enframing is its 'essence' does not allow for any creativity in its use. Both the oil rig and Photoshop are deemed technological developments, but their 'essences' do not seem to be part of the same type of engagement towards the world. One may contest Heidegger in this regard by refusing that there is an essence of technology.[18] If his analysis of the essence of technology being nontechnological is correct, then the relationship people have to specific technological artifacts can be different if the interaction is part of a different nontechnological disposition. Grouping together all forms of technology as involved in the process of placing the world into 'standing-reserve' limits the discussion of technology, because both the kinds of technologies that are included in its definition change as well as the way that any given artifact is used. The word 'technology' itself is merely conventional, and while it may give us an indication of its *prima facie* relationship to us, this can change depending on how we use it.

Heidegger disagrees with the merely correct definitions of technology as failing to get at the essential theme among them, but his own definition could fall under this critique as well, as only applying to those industrial forms of technology that appropriate resources in favor of ordering the world for human purposes. Rather, one must evaluate case-by-case and allow for cultural contingency when examining technologies. Heidegger's generalizations are only ever contingently accurate, due to their obfuscation of different facets of technology that may be more prevalent depending on one's culture and the functional organization of the artifacts themselves. Considering that any single technology does not constitute the entirety of the human experience, any knowledge revealed by technology is always partial. If I use a computer to construct a spreadsheet to budget my finances, this may very well be analogous to the technologies that

[18] See Verbeek, "Postphenomenology," 570.

Heidegger critiques. On the other hand, my computer can be a place where I engage in games or learn about the world. Even within the same artifact, my experience of it can be different, and the revealing that it affords is also contingent, as the difference in activities can follow from different modes of approaching the world.

Furthermore, while Heidegger's view retains the existential character of phenomenology, his move away from the actual descriptive method of phenomenology is problematic. It is not clear that the push towards artificial intelligence or the use of video games function as an "unconcealing" that places the world into standing reserve. While there may be elements of this analysis that are correct, the essence applicable to all technology cannot be derived if it is contingent, as an essence must be something common to (and therefore continuous with) all that falls under its definition. Rather than beginning with the technologies themselves, he creates an argument that is more focused on categorizing 'modes of being' first, then placing specific examples into the framework.[19] The divergent examples given earlier show why this is approach is limited in how technologies can be widely different in use.[20] If phenomenology is to continue to be relevant, the ability for its descriptions to change in response to noematic changes must be preserved, as is seen in the contrast between the digital technologies and the industrial ones.

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[19] See Ihde, *Technics and Praxis*, 105, 109, 125. Don Ihde's understanding of Heidegger shows how his "The Question Concerning Technology" lecture is actually rooted in his existential ontology in his larger work *Being and Time.*

[20] Here are some other examples of modern technology generating new ways of interpreting the world: Dylan Yadav, "Sigur Rós' 'Route One' Experiment Captures Iceland With Technology," *Immortal Reviews*.com, last modified April 29, 2018, http://www.immortalreviews.com/home/2018/4/29/sigur-rs-route-one-experiment-captures-iceland-with-technology; Gaetano Scippa, "John Moose, the Band You Can Listen to Only in a Forest," *LifeGate*.com, last modified June 26, 2015, https://www.lifegate.com/people/lifestyle/john-moose-band-forest.

Merleau-Ponty and the Perceptual Revelation

Maurice Merleau-Ponty represents a version of phenomenology that can account for these critiques of Heidegger by returning to the basic elements of perception. His focus on embodiment can show how relations with technology on a personal level is important in understanding them by their very use. We do not interact directly with the essence of technology. To think we do mistakenly places the abstract idea as primary and presents a static understanding of what technology is. Beginning with the experience of using any given piece of technology is important if its relationship to us is to be understood in an existential way. Heidegger's appeal to historical modes of thought taints his insights too heavily, whereas Merleau-Ponty's understanding of how perception reveals the world presents a more malleable framework for understanding.

In Merleau-Ponty's work *Phenomenology of Perception* he claims, "The real has to be described, not constructed or formed."[21] It is the situated experience of myself in the world that contains ambiguity, but this ambiguity is not just a product of 'rational ideas vs. empirical phenomena'. Transcendental idealism, the view that the mind can only have ideal knowledge about truth, is not really transcendental because it "guarantees the world…by regarding it as thought or consciousness of the world, and as the mere correlative of our knowledge, with the result that it becomes immanent in consciousness and the aseity of things is thereby done away with."[22] A shared identity between myself and the world is important for understanding technology insofar as we use technologies to engage with the world, and our use of technology means something about the nature of existence itself and not just our ideas *about* existence.

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[21] Maurice Merleau-Ponty, *Phenomenology of Perception*, trans. Colin Smith (London: Routledge and Kegan Paul, 1962), x.
[22] Ibid., xv-xvi.

Furthermore, tools like the phenomenological reduction (the bracketing of things not immediate to consciousness) are useful but never completely possible because any theoretical severance between the world and consciousness is destined to fail. Merleau-Ponty thus excludes any notion of either purely subjective or purely objective discourse.

Another important concept in Merleau-Ponty's philosophy is that, while the world is not ambiguous in the *fact* of its existence, our situated relation to the world always involves shifting qualities of experiences that define the world we live in. The perception of ambiguity is just another reaffirming experience of the world; "We must recognize the indeterminate as a positive phenomenon. It is in this atmosphere that quality arises. Its meaning is an equivocal meaning; we are concerned with an expressive value rather than with logical signification."[23] It is disingenuous to approach this ambiguity as one in which our interpretive faculties are somehow mistaken, thus justifying a Cartesian doubt. Rather, it is merely another form in which the world is disclosed in perception, and this is our ambiguous world itself. Therefore, technology as something which alienates me from the world or myself is not tenable either, because the world already exists as this stable ambiguity that I experience by interacting with it.

However, this does not prohibit insightful description of the world itself but rather indicates another aspect to perception worth considering. The example of color perception works here, because the signification of a color surpasses the "sensation"[24] aspect by its interpretation, which is its "intentional" character.[25] Perception is an active experience, not a passive one, meaning that what I perceive is not just received in consciousness but partially dependent on my engagement. An important component to this analysis of perception is the application of 'gestalt'

[23] Ibid., 6.
[24] Merleau-Ponty disagrees with the use of sensation as a valid concept largely because of this point.
[25] Ibid., 13.

in perception. The gestalt is the manner in which both contextual and particular components are simultaneous elements in active perception. Because perception is not just a matter of synthesizing bits of information to compose a sensation but always contains some situatedness and selectivity, we cannot say that our particular elements of perception precede their emergence from the world.[26] Instead, our experiences always presuppose previous experiences and only select "figures" from a "ground" that are interrelated. Gestalt as a concept is important for understanding the role of mediation/technologies in that it provides a way of addressing individual instances and objects while noting their inseparability from the synthesis of being. One might ask then: if indeterminate perception must be recognized as a positive phenomenon, does this refute the difference between the ground (world-context) and the specific figure? Merleau-Ponty uses gestalt as a replacement for 'attention', as it better accounts for the active role of perception of consciousness, and the indeterminate can exist as a point within that framework of shifting experiences.

Merleau-Ponty's understanding of how perception integrates various figures and grounds actively (gestalt) is central for describing the existential role technologies play in our lives. Synthesizing my understanding about the world with my present 'immediate' figures of perception is important for the discussion of technology, because if I can use technology at all, then it must be integrated into my framework for interacting with the world. Moreover, the intentionality of perception 'carries' my sense of context and meaning of perceptions into the future (as it is a constituent element in pre-personal perception as well).

In a famous passage from *Phenomenology of Perception* Merleau-Ponty says,

> the life of consciousness---cognitive life, the life of desire or perceptual life---is subtended by an 'intentional arc' which projects round about us our past, our future, our human setting, our physical, ideological and moral situation, or rather which results in

[26] Ibid., 16.

> our being situated in all these respects. It is this intentional arc which brings about the unity of the senses, of intelligence, of sensibility and motility.[27]

The intentional arc with which perception and the consciousness integrates with the world is also intimately connected with (but importantly not identical with) the abilities of the body. It is an aspect of being that often escapes the empirical scholar, because it cannot be measured and labeled (or compiled empirically as required for supposed 'objectivity') as reality. It is the realm of possibility, and consciousness inhabits this space. Therefore, indeterminacy, experienced as such, can be understood through the interplay of figure and ground via active perception which is constantly recontextualizing through new figures that arise in perception. In the use of a smartphone's digital interface, how I navigate through the different 'windows' engages this process as well, giving me a sense that its internal 'world' is a facet of my own.

Continuing his account, Merleau-Ponty says that "knowledge thus appears as a system of substitutions in which one impression announces others without ever justifying the announcement, in which words lead one to expect sensations as evening leads one to expect night"[28] The aspect of consciousness that surpasses pure 'observation' towards a picture (even on a digital screen) can account for anticipation and imaginative projection. Because consciousness includes these partial elements, as seen in the act of learning,[29] Merleau-Ponty claims that both empiricism and intellectualism (rationalism) fail as complete accounts on their own. Instead, we are fundamentally entangled with the world, and interacting with it allows us to realize the nature of the world we inhabit. It is important here to remember that the existence of the world in

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[27] Ibid., 136.
[28] Ibid., 15.
[29] Ibid., 28. Consciousness in the act of learning is important because it is what accounts for differences in how we engage with the world. Empiricism refutes any reason for grasping (engaging with the world in new ways), meaning that there must be something about the nature of one's existence that requires engagement with the world. Intellectualism ignores our incomplete understanding or the world. Both of these are solved through the gestalt framework. See Ibid., 30 36, 84. for the difference between construction and understanding;

general is irrefutable because of this claim. I will never 'get lost in the virtual world' and become a solipsist, because every aspect of consciousness presupposes the world in which my body exists.

His view of perception also has consequences for our own ability to understand, and it becomes clear that degrees of insight are all that is available to consciousness given this framework. The body for Merleau-Ponty is a virtual grounding of one's sense of spatiality and the pole around which the position of things is the world are organized.[30] My "body schema," the place where existence is oriented, is plastic to a certain degree. It has formed during the long habituation of its use. Walking, for example, is much different for me as an adult than as a toddler; a toddler must focus on the act of walking, whereas I often do not even recognize the walking itself, only where I am headed. Likewise, with the use of cell phones, computers, etc., my interaction with them often becomes invisible in all its actions when I am focused on using them to engage the world in a specific way. I 'embody' the physical cell phone when I am no longer aware of some features of my interaction with it (the buttons I am pressing or the way I am holding it). However, opacity in my integration with my various faculties is necessary for something like consciousness to exist, because experience needs a grounding or 'pole' of orientation for particular perspectives to arise in perception insofar as I am perceiving *this* and not *everything*. Therefore, there must be both transparency and opacity in the use of a technological artifact, as it allows me to focus on a particular set of tasks instead of being entirely focused on my biological body while maintaining a relationship with it.

[30] Ibid., 100-01.

Consciousness emerges then between the polar extremes of the body and the object(s) of intention, which again is what gives rise to the "intentional arc" and the way of disclosing the world through navigation or motility.

This configuration is understood in the following passage:

> If a being is consciousness, he must be nothing but a network of intentions. If he ceases to be definable in terms of the act of sense-giving, he relapses into the condition of a thing, the thing being precisely what does not know, what slumbers in absolute ignorance of itself and the world, what consequently is not a true 'self', i.e. a 'for-itself', and has only a spatio-temporal form of individuation, existence in itself. Consciousness does not admit of degree. If the patient no longer exists as a consciousness, he must then exist as a thing.[31]

It is important to scrutinize the elements of this intentional part to understand the world at a meaningful level. How one navigates as the intentional perceptive arc involves the system of references that incorporates the lived world and recognizes the importance of a phenomenological method brought to bear on digital experiences.[32] My very use of a computer is what gives our interaction a definite character. The world as lived constitutes the characteristics of consciousness and my situated existence, so the actions I take are fundamentally ones concerning the nature of the world I live in.

Merleau-Ponty's *Phenomenology of Perception* provides support for the connection between the navigated world in its form/structure and the existential implications of the way technologies open up new forms of experience, which transform our subjectivity: "These elucidations enable us clearly to understand motility as basic intentionality. Consciousness is in the first place not a matter of 'I think that' but of 'I can'."[33] Our selves are inextricable from our abilities, and the structure of our abilities is multi-directional. The sensory apparatuses which

[31] Ibid., 121-22.
[32] Ibid., 130.
[33] Ibid., 136-37.

dispose us towards a certain field of experiences are not just methods of interrogation but inform our consciousness of its own being. This insight is crucial to also understanding the postphenomenological method, because technology is never just a body extension without reconfiguring the definition of 'body'.

Therein, how one experiences the navigation of digital platforms constitutes the field of experiences one may draw from. What presents itself through these mediums is only part of the broader field of experiences, but the entirety of intentional consciousness comes to incorporate the insights from these specific 'places', especially when those places are frequented more often. Digital experiences (like navigating a webpage), even though they are certainly valid as 'authentic', may often need interpretation, or at least resolution, of their influences on the rest of the intentional arc of 'real-world' navigation. It would be fallacious to argue for a pure disjunction of experiences between the virtual and the physical, which would place a hierarchy upon something inherently intertwined (consciousness and subjecthood). Nevertheless, taking them to be utterly equal is also incorrect, because the being that exists as a navigating entity embodied within the digital platforms is disposed differently through the conceptual relationships to ability, but even further through the alteration of fundamental perceptual faculties which informs the sense of position in nonvirtual instances. Locomotive performance of life tasks (going to the post office or grocery store, for example) often constitute a smaller percentage of one's day-to-day activities when they are completed via digital technologies, and this is not without consequences.[34]

Merleau-Ponty's work represents an important insight of phenomenology in that it demonstrates a way of coming to understand some system from within, which is accomplished

[34] Thus, there is a transformation, but not necessarily an expansion of my activities.

by movement or navigation within the system, and it discloses itself to consciousness in this way. However, because both the method of disclosure is subject to a change in parameters and consciousness is a relational being, this phenomenological discourse requires an on-going participation. The subjective perspective yields insightful existential fruits but does not account for the contingency of the subjectivity itself. Although it places brute empirical notions of understanding in brackets, assuming the subject position (which is essential to phenomenology) has been criticized as placing too much importance on a singular contingent perspective. Merleau-Ponty certainly describes differences in perceptual experience, but his method only accounts for a first-person perspective that is not primarily concerned with technology.

Furthermore, while his account in *Phenomenology of Perception* describes the intentional motion of perception across a field, the manner in which one's intentions select their objects can either be accounted for with some concept of freedom of the will, or they may be viewed as themselves contingent on one's specific environment. This challenges the subject's sovereignty in phenomenology and marks the radical departure from this method that poststructuralism represents. Although Merleau-Ponty does mention the contingency of subjectivity in relation to phenomenological description, [35] some have challenged the very legitimacy in doing phenomenology at all.[36] While it may be true that the careful description of perception yields existential insights, these may actually be less profound if one considers that our very sense of self may be a production of something inaccessible through first-person perspectives.

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[35] Ibid., 61. "Reflection can never make me stop seeing the sun two hundred yards away on a misty day, or seeing it 'rise' and 'set', or thinking with the cultural apparatus with which my education my personal history, have provided me."

[36] See Michel Foucault, "Truth and Power," in *Power/Knowledge: Selected Interviews and Other Writings, 1972-1977* (New York: Pantheon Books, 1980), 117.

In describing the phenomenological projects of Heidegger and Merleau-Ponty, experiential constitution of our relations with technology may be elucidated. Heidegger points to the way technological endeavors reflect a more fundamental attitude towards the world in which we live in, and essentialist themes in his work are particularly challenged by the poststructuralist writers. Their ideas are also important to the understanding of an existential relationship with technologies in how they challenge the relationship between the experiences that I have of something and the system which gives me my interpretation of it. With a piece of technology like a computer, what may appear to be my subjective sense of its elements and function may be a product of a larger relationship which conditions my subjecthood (and thus the way I behave with technology). Merleau-Ponty can inform the discussion in that the intentional perceptions divulge the nature of the existential being, but the challenge to phenomenology by poststructuralist writers needs to be accounted for. If we are to reach a relevant postphenomenology, it should retain its origins in these traditions for thinking about the subjective identity of a digital-technology user.

The Challenge from Poststructuralism

In the postmodern and poststructuralist thinkers of the later twentieth century, a challenge to the validity of phenomenology is presented. Granular descriptions of experience utterly fail as tools for reaching greater or more accurate access to our understanding of reality. To many of these thinkers, I (as a subject of experiences) am not some instantiation of a universal human but instead a being conditioned by my circumstances. The meaning of any experiences I can attest to, and even what I experience in the first place, is a product of my social conditioning which circumscribes the self through language, instituted social order, and the systems that produce knowledge (the scientific community, for example).

A problem with the classic phenomenological approach is that it assumes that philosophers can isolate the essences of experience and theses essences will be capable of being universally valid, or at least generally valid. Even in Merleau-Ponty, his account of perception focuses heavily on describing visual experience. Given the vast differences in cultural, environmental, linguistic, and social experiences, many have questioned whether phenomenology can really "bracket" these kinds of background determining experiences or if the phenomenologist is always a human indirectly reflecting his or her time, thus challenging the usefulness of doing phenomenology whatsoever. The descriptive method of the role consciousness plays in constituting experience is meant to expose the most fundamental and immediate facts of what can actually be experienced directly. Traditional philosophical argumentation often reaffirms some problematic assumptions or pretends to have some objective, non-situated position where philosophical ideas can be discussed. Heidegger's conception of technology, for example, attempted to discover the essence behind technology while "reducing concrete technologies to nontechnological things such as 'technological thinking' or 'the system of mass production,' with technology itself, in the end, falling out of the picture."[37] The importance of having a specific technological artifact to discuss without homogenizing all of technology helps keep the discussion focused on immediate experiences of the world, but these immediate experiences are at most unconscious reproductions of socially conditioned biases.

Postmodernism thus critiques phenomenology by arguing subjectivity is constructed socially. Within the phenomenological reduction, pure consciousness is never really pure but a reflection of the way the philosopher has been constituted by extra-experiential norms. Thus, phenomenology is not a meaningful enterprise that can uncover less alienated experiences

[37] Verbeek, "Postphenomenology," 561.

because the self is circumscribed and constructed by social structures. Michel Foucault's critique of valueless truth is an important point to consider in this regard. He views the role of the "middle region"[38] between the fundamental implicit codes of perception (the perfectly bracketed experience) and explicit reflective knowledge (what phenomenological description attempts to do qua describing) as the space where the actual structure of truth relations take place. This is a challenge to phenomenology in that, in (ostensibly) describing some basic immediate experiences, this method pretends to be one pole (the starting point of presupposed schemas) while actually being the other (reflective knowledge). The importance of this point is that any description given to experience is inseparable from that "middle region" that has already conditioned this knowledge. No return to immediate experiences is possible, because even the beginning codes of immediate perceptions are products of the previously overturned changes in order. Therefore, the space between implicit codes of meaning and the explicit representations of knowledge to consciousness is what organizes experience and constitutes it in the subject's understanding. The way in which truth is produced undercuts the authenticity of the phenomenological description, because the subject (the 'I') is contingent upon the system that conditions the meaning of experiences.

Foucault describes the character of this region in the Preface to his book *The Order of Things*:

> A system of elements – a definition of the segments by which the resemblances and difference can be shown, the types of variation by which those segments can be affected, and, lastly, the threshold above which there is a difference and below which there is a similitude – is indispensable for the establishment of even the simplest form of order. Order is, at one and the same time, that which is given in things as their inner law, the hidden network that determines the way they confront one another, and also that which has no existence except in the grid created by a glance, an examination, a language; and it

[38] Michel Foucault, "Preface," in *The Order of Things* (New York: Pantheon Books, 1970), xxi.

> is only in the blank spaces of this grid that order manifests itself in depth as though already there, waiting in silence for the moment of its expression.[39]

Foucault is identifying something "anterior to words, perceptions, and gestures,"[40] but it is also a concrete phenomenon that can be referenced. He calls this the 'episteme,' and it relativizes any discussion of the subject in that it locates an anterior order which circumscribes it. Our very sense of what a subject is, which in phenomenology is actually the ultimate grounding for everything else, is not revealed to us from our experience but from the episteme that governs a certain era and locale. Why should it matter *how I experience* technology when my experiences and even the 'me' are conditioned by something more fundamental? The question is especially crucial considering that the episteme which produces subjectivity is not universal for all subjects, limiting my phenomenology (no matter how well it describes my subjective state) to only myself. Thus, the episteme may in fact be all that is reflected in a phenomenological description. Insofar as the phenomenological proceeds from the subject, its content will not identify the episteme *as such*. Any attempt to continue the relevance of phenomenology must account for this criticism.

The application of this type if philosophy could be in examining the way manufacturers unwittingly inscribe logical approaches into the computational relations of computer software that obscure parts of reality.[41] For example, the author James Bridle says that "By reifying the concerns of the present in unquestionable architectures, computation freezes the problems of the immediate moment into abstract, intractable dilemmas; obsessing over the inherent limitations of a small class of mathematical and material conundrums rather than the broader questions of a

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[39] Ibid., xx.
[40] Ibid., xxi.
[41] See Bridle, *New Dark Age*, 4. Bridle sees this as thinking in terms of technical solutions to everything.

truly democratic and egalitarian society."[42] In this he examines the systemic structures which govern the digital world and shows how they also determine the subjective sense of the world, and that includes the technology itself.[43] Computer technology changes our understanding of the world by both enforcing the idea that the world works in terms of micro-level instances of technical problems that have technical solutions *and* by 'covering up' the process by which these technical mechanisms work. Bridle takes the way that computer technology has developed into an extensive part of contemporary life as something which has shaped our very subjectivities, in this case instituted 'computational thinking'[44]. In a similar way to the poststructuralist philosophers, Bridle isn't as concerned with how we as subjects understand our experiences as much as he is focused on the larger systems of knowledge that cause us to think and become different selves while at the same time obscuring their role in doing so.

Jean Baudrillard's work *Simulacra and Simulation* reflects many themes of the poststructuralist era and the political and technological tumult of his time (1981), as well as our own. The central concept of the work, hyperreality, consists of an explanation of the semiotic severance between the real and its symbolic correlates. His understanding of how signs and information come to saturate existence is applicable with regards to the integration of technologies that are present in the digital world, because this is a world that is composed entirely of designed symbols that relate to each other. A smartphone is an example in how its interface is composed of images and tactile features that determine what any given feature means. By their interaction, the relationship between two features (the icon of an app and the

[42] Ibid., 34.
[43] Ibid., 32. Bridle also seems to follow Foucauldian thought in the way this 'order' can supersede its governing capabilities by some excessive results that in produces.
[44] Ibid., 4.

vibration made when it is pressed for example) mutually reinforce their individual purposes and of the nature of the phone itself.

Baudrillard's concept of simulation invokes the circumscribed system of signs (of the world in general) that presents a hegemonic worldview which, by needing to represent the world so that it has meaning, controls the discourse. The precession of simulacra (the primacy of signs in experience) constitutes a sort of self-referential system.

He states that,

> The universe itself, taken globally, is what cannot be represented, what does not have a possible complement in the mirror, what has no equivalence in meaning (it is absurd to give it meaning, a weight of meaning, as to give it weight at all). Meaning, truth, the real cannot appear except locally, in a restricted horizon, they are partial objects, partial effects of the mirror and of equivalence.[45]

This echoes Foucault, and Baudrillard's system does not allow any method for escape from this circular state of confusion. Here again is a challenge to phenomenology in that the appeal to a description of experience effectively precludes the success of the project from the start. Lived experience is seen to be nothing more than the local navigation between the most extreme signs, and this results only in confusion. Particularly with the introduction of media elements, the control of the discourse is exacerbated.[46]

In a world of simulation, confusion of the difference between what is real and mere simulation is universal, and in this situation the subject's access to 'reality' itself is prevented.[47]

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[45] Jean Baudrillard, *Simulacra and Simulation*, trans. Sheila Faria Glaser (Ann Arbor: University of Michigan Press, 1994), 108.
[46] Ibid., 84.
[47] In this sense Baudrillard often seems to presuppose a 'lost' reality prior to the condition of simulation. If this were true, he would not be critiquing modernist ideas as deeply as Foucault. However, I have chosen to interpret Baudrillard to mean that it is our *experience* of reality as reality that is impossible with the precession of simulacra. As this condition is one where all meaning can be exchanged for any other (equivalence), our experience of the world is no longer one in which we experience it a world beyond signs of signs. This would be an existential critique, rather than a Foucauldian systemic critique. In this way Baudrillard challenges the possibility of even attempting a phenomenological account, as even the mere pretense of subjective experience is tainted by the hyperreal impossibility of unequivocal meaning.

No phenomenological description is possible either because it would only be describing the relationship between signs.

Baudrillard states further on:

> It is no longer possible to fabricate the unreal from the real, the imaginary from the givens of the real. The process will, rather, be the opposite: it will be to put decentered situation, models of simulation in place and to contrive to give them the feeling of the real, of the banal, of lived experience, of the quotidian, but reconstituted, sometimes down to disquietingly strange details, reconstituted as an animal or vegetal reserve, brought to light with a transparent precision, but without substance, derealized in advance, hyperrealized.[48]

The critique of self-referential systems is also important in considering how a technology can create specific forms of understanding merely by having these internal relations. When the elements of discourse operate only in reference to each other, their relationship changes and can become exaggerated, as well as universal.[49] Bridle shows this when he says, "Computational thinking…slipped out of view. It became unquestioned and unquestionable, and as such it has endured."[50] The challenge to the first-person perspective of phenomenology is clear: our digital technology has become so inaccessible to us that anything we say about it from a subjective point of view is at best a representation of representations, or simulation.

To return to previous examples with the poststructuralist critique, the role that computers and smartphones have in my personal life is always contingent upon forces that shape my subjectivity. My ability to even question the normality or meaning of my use of a smartphone may be contingent on some arbitrary distinction between myself and technology. I can only have discourse concerning the nature of my relationship with a system of menus and screen-contained shapes if I am aware of their existence as objects of the world. Because of the designs which

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[48] Ibid., 124.
[49] Ibid., 92.
[50] Bridle, *New Dark Age*, 32. See also Bridle, *New Dark Age*, 34, 38.

have shaped my understanding, I am able to reference something that can be invalidated if discussed differently (such as talking about the role of binaries in computer technology constructing my understanding of logic or the ubiquitous access to facts via the internet shaping my idea of truth). My subjective sense of the computer is insightful only insofar as it channels a macro-level production of meaning, but this is still never *truth* in the sense of something invariant with the use of any specific piece of technology. On the other hand, if we give up the quest for truth and instead try to focus on something immediately relevant to our lives, the phenomenological understanding of our current technologies needs a different approach from Heidegger's.

Postphenomenology's New Paradigm

Postphenomenology[51] attempts to combine the insights of the poststructuralist and phenomenological paradigms of thought, and it even uses empirical studies insofar as they are applicable. If the foundational method of perception as consciousness ultimately only leads into the structural networks of relationships, it still remains the only possible point of access regardless of the particular interpretation of its implications. The phenomenologist's conclusions can be seen as problematic in their generalization of contingent situations, but to dismiss the entire approach of phenomenology in favor of poststructuralism is unnecessary and creates a false antithetical relationship. To deny phenomenology as completely irrelevant does not only deny the importance of a subject, but the existence of consciousness itself. Even if the subject is only a product of external structures in a particular time period, particular subjectivities are still important elements in the process of constituting subjectivity as they point to something about

[51] Don Ihde credits himself with coining this term. See Don Ihde, "Preface: Positioning Postphenomenology," in *Postphenomenological Investigations: Essays on Human/Technology Relations*, eds. Robert Rosenberger and Peter-Paul Verbeek (Lanham: Lexington Books, 2015). xiii.

the system which produced them. Foucault's explanatory framework does not discuss the particularities of firsthand experience, but the interaction between technology and subjectivity is an important component to any type of order insofar as it represents a pervasive activity socially and for each individual.[52] The extent to which I continue to use a piece of technology is important, but how I experience my use of it is unimportant for Foucault. There is also the matter of how my understanding of my use of technology influences my use of a technology, and this may represent the lineage of poststructuralism in postphenomenology. However, postphenomenology is different from phenomenology in its existential examination because it does not claim authenticity or invariant elements of experience. It is also different from poststructuralism in that it wants to retain the importance of my experience of the world, even if that is ultimately a product of some larger order. How I understand myself is important to me regardless of whether it is relevant to truth claims.

However, it is important to recognize that some aspects of phenomenology and poststructuralism must be substantially revised if not discarded. The authority of the phenomenological perspective regarding its direct access to experience is certainly rejected by scientific empiricism, as our larger experiential framework (intentionality) necessarily is not measurable by modeling the world.[53] Poststructuralism generally rejects both as saying anything definite about the nature of things, so any ontological declarations or conclusions from firsthand experience about the definite nature of existence (consciousness/perception/etc.) must be denied by the poststructuralist thinkers (as well as Merleau-Ponty). However, the existential component, meaning the direct implication of experience to the world as it relates to living and constructed meaning would only be important to Foucault's poststructuralism insofar as it produces action

[52] See Foucault, "Truth and Power," 124.
[53] Merleau-Ponty, *Phenomenology of Perception*, 23.

related to the maintenance of power structures, whereas Baudrillard may deny that this is possible at all. The experience of living out one's subjective expression can be authentic even if that the sense of living in the world is an aspect of those systems that produce and circumscribe the definition of the subject.[54] The question of how subjectivity emerges is answered differently, but the subjective as lived still remains an element in this configuration. In the first place, while I can attempt to uncover the hidden structures that are responsible for the constitution of the subject, as long as I continue to exist as a particular subject my experiences can be discussed as they are meaningful for me. Even in hyperreality, meaning as equivalent to all other meaning does not prevent me from experiencing it as such.[55] Once I have discounted all attempts at discovering some positivist objective truth (a point common to both major schools of thought), I still have every justification for wanting to 'figure out what my experience means to me'. Therein, there is reason to describe the lived experience even if this description is only existentially meaningful.[56] Personal descriptions of experience operate as a way for myself to examine my relationship to aspects of the world, but insofar as descriptions have the capacity to bring elements of my own existence to the forefront of my consciousness, others may also be brought to think about experiences in the same way. While this eliminates the possibility of uncovering invariant elements inherent in consciousness, it also allows the existential meaning of my experiences to be discussed despite the challenge from poststructuralism.

The discussion of technology that emerges in postphenomenology is interesting for several reasons: the conception of the self and its expression could be conditioned and altered by

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[54] As I have already discussed in Foucault's work.
[55] Baudrillard's description of how Disneyland functions within hyperreality is an example of how simulacra can be described as meaningful even if that meaning is ultimately empty in signifying anything 'real'.
[56] Cf. Simone de Beauvoir, *The Second Sex*, trans. Constance Borde and Sheila Malovany-Chevallier (New York: Alfred A. Knopf, 2009). While this text is not a work of postmodernism, it uses a phenomenological approach while also incorporating external forces which shape our subjectivity. For postphenomenology, accepting the contingency of generalized accounts does not prevent some existential meaning to 'slip through' in its descriptions.

the technology, the impact of any technology may not be the same between different subjectivities, and the distinction about what is considered technology may vary. How I relate to technology is of course important for my experience as well. For Don Ihde, "postphenomenological claims are never about the absolute foundations of reality or knowledge, and never about the "essence" of an object of study. Instead, postphenomenological claims are posed from an embodied and situated perspective, refer to practical problems, and are empirically oriented."[57] In attempting to overcome some of the issues of the two ways of thinking about the world (phenomenology and poststructuralism), postphenomenology is a way of taking up the relevance of philosophy for the individual's day-to-day experience of living in a world populated by digital technology.

Postphenomenology of Using Digital Technology

Postphenomenology retains the existential focus of much of phenomenology, and while it does not attempt to answer with the level of exactness questions about the ontological structures of experience that is present in classic phenomenology, this gives it the ability to incorporate structural relationships and their effects on the subject and even consciousness, thus allowing for macro-level discussions to be relevant (although they aren't always the focus of postphenomenological investigations).[58] The discussion of technologies needs this because, despite their complete dependency on humans and the structure of their worldview, their effect on the world of the human is not entirely embodied or recognized within the intentional arc of the first-person perspective.

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[57] Ihde, "Preface," 1.

[58] See Don Ihde and Evan Selinger, "Merleau-Ponty and Epistemology Engines" *Human Studies* 27, no. 4 (2004): 361-376. This article is an example of postphenomenologists discussed larger trends in knowledge production.

The way in which the construction of a technological medium expands the "phenomenal field?"[59] always supersedes the designated function. It is not the case that the artifacts of civilization are nothing beyond the extensions of an inherent core of human agency and desire, even an output of foundational epistemology, but an active transformation of what it means to be in the world. This does not reject all notions of technological embodiment, but rather incorporates the expansions necessary for technology to be technology into the affective constructions of the subject and society. As Ihde has succinctly put as a contradiction, "I want the transformation that the technology allows, but I want it in such a way that I am basically unaware of its presence."[60] A reference back to Merleau-Ponty's transparency/opacity of situated existence is helpful; just as with biological embodiment, in order to act through technology I must both be partially unaware of its mediation to focus on what it allows me to accomplish and partially aware of its opaque elements that transform my existing capabilities. Beyond this, Ihde claims that we also (contradictorily) strive towards complete transparency as our motivation for engaging with technology (and towards fully assuming our new capabilities). Characterizing relations with technology in this way is an important insight of postphenomenology, because the way in which I use technologies can be useful for thinking about how they are incorporated into my broader existence.

The experience of navigating the online and digital environment is salient, because this is what constitutes my understanding of them. What direct connections exist between the user and the materials or beings that are engaged with is what constitutes the existential (or lived situation) connection between the organic being and its digital correlate (how my actions are

[59] Merleau-Ponty, *Phenomenology of Perception*, 63.
[60] Don Ihde, "A Phenomenology of Technics," in *Philosophy of Technology, The Technological Condition: An Anthology,* 2nd edition, eds. Robert C. Scharff and Val Dusek (West Sussex: John Wiley and Sons, 2014), 541.

represented digitally). In other words, the ways in which these digital interactions fit into the experience of an investigating consciousness is related to the meaning these artifacts make within a lifeworld, as has been discussed. Instead of bracketing the various abstract versions of socially transferable knowledge in order to understand the structure of consciousness or perception, postphenomenology is an attempt to incorporate lived experiences in a world where these technologies are a fact of the world, emphasize certain modes of perception, and seemingly have their own dispositions, albeit ones contingent on the human factor (barring true artificial intelligence). It is therefore not concerned with the project of ontology or essences, because what is expressed subjectively is existential and contingent. Technology is an appropriate topic in this because of its fundamentally inseparable nature from the human (given that it is designed by and used by humans). We cannot describe technology on its own terms. Therein, examining my experiences with my digital artifacts is something which must be returned to frequently in a postphenomenological description.

Relations with Technology: Embodiment vs Hermeneutic Relations

When I am browsing the internet via my smartphone, part of me seems to exist in a separate place.[61] While the notion of authenticity is placed aside (is this more or less the 'authentic me?'), this realm is different in how I navigate through it, and my intentional experience (how my active perception works within it) is different as well. On the other hand, it is never entirely severed (I experience in both situations of course), so what results is the emergence of a distinctly formed being which transformed. How to understand this process and how to distinguish between the nature of digital experiences and the world of my biological body

[61] See Ruth Rettie, "Presence and Embodiment in Mobile Phone Communication," *PsychNology Journal* 3, no. 1 (2005): 16-34.

is a paradigmatic question of postphenomenology. One way of asking this is: how, when using digital technologies, do I relate my experiences back to either the *virtual* world or the *physical* one? The ambiguity between these options has the potential to create a distinct existential situation concerning the 'grounds' of experiences with these technologies, as I will discuss shortly. However, instead of viewing this as a 'fracturing' of a once-complete experience of the world, the previously mentioned gestalt framework helps to understand how our use of digital technologies only changes the specific qualities of our dynamic existence.

One of the most important models in the postphenomenology of technology shows the relation of my existence to technology within the intentional structure. Technology as mediator between "human" and "world" varies depending on the piece of technology as how it is used. Don Ihde's framework for thinking about human/technology relations is one of the most persisting and helpful ways of thinking postphenomenologically. I will here give a brief description of two relations that characterize human relations with technologies: embodiment relations and hermeneutic relations.[62] Importantly, these are only helpful insofar as they describe repeated observations of specific technologies: they do not claim ontological status as fundamental ways of how human in general (must/always) relate to technology.

Embodiment relations are those which maintain the world as perceptual terminus and are largely transparent in my perception.[63] Technologies that I relate to in this way function as

[62] Hermeneutics is a term historically designated to the interpretation of texts within their own cultural/historical context. Heidegger and Gadamer expanded on how the study of hermeneutics was applied to philosophy, and it began to denote the method of creating a context for interpretation of elements of any given system. Ihde also expands on the term, using it in a special sense in relation to technological relations. It is in this sense that I use the term, and do not claim to account for its historical usage. See Ian Bogost, *Play Anything: The Pleasure of Limits, the Uses of Boredom, and the Secret of Games.* Narrated by Jonathan Yen. (Newark: Audible, 2016), Audiobook.
[63] See Ihde, *Technics and Praxis*, 7. The perceptual terminus has to do with the noematic component to perception. For example, if I am confused about what a shape is or what it means, and then come to understand these things about it while I am looking at it, the perceptual terminus remains the same (i.e. the object itself) despite the perception as a whole being altered.

extensions of the body, although they are often very different in their capacities. Ihde models this as:

(human-technology) → world.[64]

An example of this is the way in which a smartphone's camera allows for the preservation of visual and auditory experiences to be examined in a static form. Other examples may be the use of a phone to make calls (voice extension) or the recording of audio in order to remember or repeat the contents of the ear (often back to the ear). These characterizations can themselves contain different levels of transparency and opacity in the alterative effects of using the technology. In the most extreme cases, the embodiment becomes mostly transparent and becomes invisible to perception, such as the case with eyeglasses or clothing. The embodiment relation is a common form of relations and demonstrates Ihde's earlier point about the way my drive towards transparency is an existential contradiction of wanting transformation and transparency. One thing to keep note of is that embodiment relations are concerned with the transparency of the artifact during my use and not with what the artifact is directing my perception towards.

Another relation configuration with tech is the hermeneutic:

human → (technology-world).[65]

Hermeneutic relations are different in that the perceptual focus is the artifact itself, and any conclusions resulting from its use are represented by the internal logic of the system in which they are arrived at. The use of a computer to organize files in a specific way or to access an anonymous social media website is an example of hermeneutic relations. While these actions still point to features of the world beyond the artifact in some way, they do not translate directly into

[64] Ihde, "Phenomenology of Technics." 559.
[65] Ibid.

an existing perceptual faculty. This is not to say that they are removed from perception either (how else would we engage with them?), but they are not forgotten in the transparency of the intentional perception: they themselves are the focus of the perceptual terminus. It is important to note that this distinction does not necessarily mean that the object itself is viewed as meaningful or problematic in itself.[66] I can use a computer to set my calendar, read Wikipedia, or browse Reddit and have a sense that these tasks refer to something beyond my specific actions despite my perception being centered on the user interface[67] of the computer. The way of acting either through an instrument or of perceiving its qualities directly creates too hard of a dichotomy; the hermeneutic relation, while existing as the perceptual terminus, "'refers' beyond itself to what it represents."[68] Meaning circumscribed within this system can thus point outside of the piece of technology itself. Through the internal logic of website navigation, for example, I can plan out future action or learn about features of the world through Wikipedia or Reddit without having the structural characteristics of these websites as the focus of what is meaningful in the situation. The characteristics that remain at the perceptual terminus are also not the purpose of my web browsing; it is what is understood by reading text and other mechanisms of interaction (such as 'upvotes on Reddit' or the way Wikipedia links to other content) that is the purpose of using the technology. As such, the artifact of the hermeneutic relation maintains the character of (technology-world) without collapsing the two terms into one. Within the hermeneutic relation, 'embodiment' can seem also to occur, as the perceptual terminus involved is inhabited by perception (in Merleau-Ponty's account). However, this 'hermeneutic-embodiment' is not transparent to the extent of embodiment relations and distinguishing here is important.

[66]Therefore, this is not equivalent to Heidegger's present-at-hand and ready-to-hand distinction. See Ihde, *Technics and Praxis,* 120.
[67] Meaning the platform that shows me what is happening within the virtual: the operating system.
[68] Ihde, "Phenomenology of Technics." 545.

Hermeneutic relations as the terminus of perceptions are useful in that they allow humans to access ideas about things in the world that are not clearly relatable through our existing modes of perception, but the price for this is that we cannot act through them (qua hermeneutic artifacts) in the same way that we embody other artifacts.

The two types of relations described above exist on a continuum (concerned with how transparent/opaque my use of an artifact is), as we shift from the embodiment relation to the hermeneutic, a different character emerges (as described above). While these two relations are not the only ones that Ihde describes,[69] their existence as variations on a continuum represents the substantial shift which can facilitate a point of existential ambiguity. I will return to this point after continuing the overview of this relational model.

Another feature of the model and arguably the most important is the 'enigma position': Ihde's characterization of what is represented by the hyphen in his model (human-technology).[70] The barrier between the self and technology in the embodied relation is enigmatic, or ambiguous. In the case of embodied relations, what can be considered an extension of the body is controversial itself. In Merleau-Ponty, the affordance (meaning what an artifact allows me to do) of simple embodiment is accounted for by recognizing the schematic character of embodiment itself. However, since his main example of extended embodiment was a walking stick and not the complex nature of our current technologies, an updated conception is needed. The cellphone camera is a perfect example for this point, as it blurs the distinction between my eye and the camera's aperture. The hermeneutic variant (technology-world) provides the same conundrum in that features of the technology and its representation of the world are two things difficult to distinguish. An example of ambiguity about what is read into the hermeneutic function is clear in

[69] Ibid. Alterity and Background relations are also discussed.
[70] Ibid., 547.

outdated icons, such as the ‘save button’ or the ‘call button’ icons that exist to perform a function very different than the origin of their icons represent. The feature which solely belongs to the artifact can be confused with its supposed feature ‘in the world’ in this way.

Ihde and subsequent postphenomenologists subscribe to the dual amplification[71] and reduction model, which is essentially that any change in perception/self/world is never purely expansive but rather, in focusing on certain features of the world, others are diminished. A simple example of this in our cell phone camera example may be in its role as a *substitute* for immediate vision. Whenever I choose to use my camera to view something (to record video or have access to its zoom function), I am relying less on my ‘pure’ eyesight for this situation. Thus, I am marginally more familiar with experiencing the world through a camera and less so with my own eye. The camera’s abilities may amplify certain aspects of vision, but the reduction in this situation may be that peripheral vision is eliminated in the screen. Technology is always a transformation, but it does not ‘expand’ our abilities, it merely changes them (anti-positivist understandings of both poststructuralism and Heidegger are represented here, but without Heidegger’s preference for the older forms of experience).

Another difference from classic phenomenology is how these relations with technologies are understood as dependent on the actual use of the artifact. A technology can exist validly in different ‘stable’ contexts, and the notion of ‘multistability’ attempts to account for this. The multistability of objects places an extra importance of the existential attitudes of towards their use because their purchase of abilities in the world depends on this. The necessity of specific forms engagement with a computer (meaning that an interaction will always be particular) is also due to its incorporation of purpose within an intentional arc (meaning that it arises as figure

[71] Sometimes called magnification.

through active perception in relation to my purpose for its use). I place the idea of the artifact into a specific interpretive framework, and this itself is variable. For example, I cannot turn on a computer and use its tactile and visual functions to satiate my hunger directly, but I can use it to alternatively obtain visual instructions to make food or discern the best restaurant option given to me in a list from the internet. I could also use the same functions to engage in stalking or harassment. These options are first conditioned by the difference in kind of my relation to artifacts and providing the existential 'fit' within how I live my life, and the second example shows how the use function completely changes depending on the user. Examples such as these show the multistability of the existential relation of the artifact, because my relation to it is not always the same in its context of use and could differ drastically from someone else's approach. Even within the same category of my relations with a computer, it can be a different artifact for me. Using a digital camera (like that of a smartphone or a webcam) can be at times an extension of my eye and at other times a stand in for the eyes of someone else (for example if I take a picture for them). Underneath every postphenomenological description then lies the contingency of multistability.[72]

'Multistability' is a crucial synthesis of phenomenology and poststructuralism in opposition to purely empirical accounts in that relations with a piece of technology are not just culturally contingent, but a fundamental part of human perceptions in every context. In Merleau-Ponty's phenomenology, the notion of the gestalt's rendering of figure and ground is an interrelated constitution of perception, and intentional perception's continuous synthesis of disclosing the meaning or interpretation of the world is just that: an interrelation which is partly

[72] Ihde also mentions the 'intentionality' of artifacts themselves. The tendencies for us to engage with an artifact in a specific way creates its intentionality. However, these intentionalities are described through my examples, so I have left out this concept in order to avoid one more specialized term.

contingent on the pole of bodily experience. In also recalling Merleau-Ponty's idea of 'positive ambiguity', multistability provides a postphenomenological way of thinking about technology.

Digital Technology as a Complex Relation

I relate to my digital devices as both embodied artifacts and hermeneutic technologies, but this combined way of relating to my technology has resulted in them becoming an integral aspect of my daily life. Because these relations can be part of the same overall actions, thinking about the separate facets of my interaction is helpful for understanding the role they play in my life. Therefore, I will examine these two ways of relating to my computer and smartphone technologies. Firstly, embodiment must be discussed sufficiently to demonstrate the ambiguity between the embodied and the hermeneutic.

Embodiment Relations With Digital Technology

What is the first thing encountered when navigating digitally? Tactile interrogation finds the power switch of any device as its method of "awakening." The response mechanisms provide feedback about the success of my efforts and begin to activate. Often there is a light which activates and signifies the effect of my actions, beginning the process of embodiment. The screen lights up and its contents correspond to my prompts through various other pieces of hardware, such as the mouse, keyboard, or touchscreen. My calibration is followed by the subsequent lack of focus on the hardware instruments, sometimes locating the experiential locus back into the non-digital world (in the case of a camera or audio transmission), and at other times into the arena of the screen (where my mouse/keyboard/touchscreen commands are solely concerned with manipulating the elements given to me by the design of the operating system, the software).

To be clear, the process is as follows: I embody the hardware (embodiment relations), there is a technical realm of digital files and folders that I must interpret (hermeneutic relations), and another change occurs depending on the features of the computer or phone that I use, like using a camera versus playing a social video game.

In the first case, I seem to be acting not only through the hardware of the technology so as to activate it, but also perceptually through the whole of the device towards some transformed but isomorphic (meaning analogous to a biologically prior perceptual faculty) noematic content. I use my phone to see the world through the camera function, or I use it to play sound to make my location experientially different. It is less of an object of my gaze or hearing and more of a capacity to accomplish my visual or aural intentions through a transformation of my perceptual situation. How I incorporate these features into my overall intentional arc determines this degree of transparency. I continue to engage with the world through my biological body's capacities, but with the aid of technology to alter their characters. My understanding of self is implicated in this for the reason that I am fundamentally entangled with the world as a shifting network of perceptions and capabilities. Phenomenologically, my relations to digital devices happen as part of my overall interaction with the world. So they as long as they are working properly, I *can* anticipate their transformations without issue.[73]

A closer look at the structure of embodiment may be helpful. If I am unfamiliar with the calling feature of a smartphone and operate it in this way, more focus is placed on the interface and its difference from my 'normal' voice and ear than if I am very familiar with talking on the phone. However, the relation remains one of embodiment, although its opacity (what is not transparently known to me) differs. Each body schema is also different in relationship to this

[73] Of course, this is not guaranteed, as there are many ways to interact with any piece of technology. Insofar as the technology is acted through, the anticipated transformations are potential means of engaging with the world.

technology, as the automatic caller has a larger degree of existential identity invested in this capacity of calling. The character of embodiment relations is a perceptual transformation, albeit one with a certain amount of opacity, which facilitates the body schema's transformation by its very difference from the biological body. When I look through the camera of my smartphone, part of my noematic structure is focused on the difference between the objects in the camera and normal vision, and this difference is the camera itself. The camera itself recedes phenomenologically, which is what makes it opaque. Therein, looking through the camera facilitates a difference in how I orient myself within a particular context. Its capacity to decentralize the noetic activity facilitates a new existence by providing me a different way of relating to objects through the camera. As the basis for intentional consciousness is that, through the various perceptual faculties, one's existence is always between the objects of the perceptual field, my use of technology in embodiment relations is not alienating or new *in principle.* In the words of Ingrid Richardson, "That we can oscillate between, conflate and adapt to ostensibly disparate modes of being and perceiving – i.e. to being simultaneously 'here' and 'there' – is precisely why telepresence and virtual space are ontologically tolerable."[74] Merleau-Ponty's embodiment already has shown this as it applies to the biological body, and the same description is accurate for the schematic inclusion of technological extensions.

These transformations existentially allow for changed conceptions of the self, because the intentional arc incorporates different capacities. A self embodied through technologies that extend or transform the perceptual terminus incorporates these perceptions into the overall arc when navigating the perceptual field.[75] In other words, I have different types of abilities with

[74] Ingrid Richardson, " Mobile Technosoma: some phenomenological reflections on itinerant media devices," *Fibreculture* 6 (2005).
[75] See Rettie, "Presence and Embodiment," 20.

which I can disclose the nature of the ambiguous world, and the character of the world in which I live features different kinds of perceptual experiences.

Another example of this is when, in the use of social media, the filtered world perceived through a camera then alters the potential navigation of the physical world in that it becomes a world where cameras may be considered as a factor of constructing figure from ground. Alternatively, a nonvisual example is the retrieval of audio from some internet database, such as an air horn website that can play the sound at will. It is both an extension of my capacity to create sound and the ear because the sound is an intended utterance while at the same time 'artificially' coloring the auditory qualities of any given context. Therein, the embodiment configuration has phenomenological and existential implications, as the correlation between noetic and noematic components of existence is demonstrated.

However, the consequences of embodiment are certainly difficult to generalize, particularly with respect to interconnected technologies present in computers and smartphones. For instance, Ruth Rettie describes accounts of talking on the phone that create a conflict between two physical places, resulting in a sort of 'third virtual place' in between the places where the two conversations happen.[76] We can interpret this as a positive experience of indeterminacy, but in qualifying this with the multistability of relations, my experiences with digital embodiment are always contingent. For many people, the 'telepresence' may be so familiar of an experience, one so integrated into the possibilities of the world that at any moment, contact from anyone in the world is possible in this space. On the other hand, even if I can capably embody the phone as a transparent extension, its actual use may seem awkward or intimidating to me. Existentially, the phone discourages itself as a possibility for action due to

[76] Ibid., 21.

my anxiety over its use even if I am technically proficient with it. In this way, the postphenomenological approach is not concerned with uncovering some essence of how technologies always impact our lives, instead it examines possibilities of ways we can understand the world and live differently in it.[77]

One complication of discussing digital technology is that it is much more than an embodied tool. My phone and computer can contain features that are embodied, as I have just described, but they are also a system to be interpreted on its own terms. When I use the camera, audio recorder, these are stored as files on my computer's memory. They become digital objects that mean something to me. How I relate to this larger 'user interface' of the computer is a question that cannot be divorced from my interaction with technology. While postphenomenology places importance on maintaining a close connection with actual technologies, dividing up the use of such aspects of a single artifact would be problematic because their combined capacities are mutually influenced in how they function and because they are incorporated through the same digital kind of technology. My computer and smartphone contain interrelated digital abilities that can be accessed by each one or both. These abilities are experienced as departing from the same artifact, as well as being distributed between them. How the of separate facets of a single type of artifact integrate is the question to be examined, and this is the previously mentioned relationship between the embodied and hermeneutic relations. I will next describe how I relate hermeneutically to the technologies in question.

[77] Kiran, "Four Dimensions," 124.

Hermeneutic Relations with Digital Technology

In many of my interactions with computers, I am actually perceiving the artifact itself. I inhabit the world of my digital artifacts when I interact with the files on my computer and their context within an operating system. In my preceding descriptions of embodiment, I incorporate the artifact into my intentional arc as extended capacities of my biological body schema. When I decide to browse the internet, I often am focused on the contents of the virtual world itself. Hermeneutic relations maintain the perceptual terminus on the features of the artifact, and this describes my actions in this instance of using a digital device. In other words, I see, feel, and hear the computer more as something that exists as a meaningful to interact *with*, rather than *through*. It has a higher degree of opacity and so is perceived more as a figure of my perception, rather than receding into the background.

How do the artifacts in this way function within my existence as a whole? Although interacting with a hermeneutic object seems to involve a kind of 'embodiment', it is merely one which is disclosed by interacting with it as characteristics of its internal logic (which then point to some abstract characteristics of the world). Since I am perceiving the digital contents as my perceptual terminus, 'embodiment' in this sense is only so in the way Merleau-Ponty describes the intentional process of interacting with the world, and similarly, I come to understand the nature of the digital world by acting within it.

Ihde's postphenomenological framework helps clear up some of the contention of how I relate to computers in their primary capacities *as* computers. While there seems to be a degree of 'isomorphism' (retaining a character analogous to existing modes of perception) between my biological body and some computer functions (like my cursor possibly being a correlate to the hand), and this is enough to have warranted some authors to draw the conclusions that the

computer is actually embodied transparently, the *perceptual* transparency is missing from my use of it. When I browse my computer or connect to the internet, whether or not I recognize what my actions comprise in an existential sense, I maintain the visual (and often aural) presence of the instrument itself in my perception. Its features are the figures arising in my intentional arc that I apprehend as objects in the world. My screen contains contents that are meaningful in their representations, not in their transformation of existing forms of perception.[78] In the following section, examples are given to highlight this relation more thoroughly.

Joohan Kim's analysis of 'digital being' views the computer "As a processor, transmitter, and storage of human perceptions" that "becomes an extension of our body."[79] While this seems correct for features like the camera, the thing which "processes", "transmits," and "stores," is not an extension of our body schema in the same sense. It can be a way for my intentional arc to encompass and synthesize the meaning of world in which I act, but not one which alters my perceptual disposition from the beginning as something that recedes into the background. A reference back to the 'enigma position' of Ihde's model is applicable here; when I arrange, share, and store the digital files (and applications to an extent) on my computer or smartphone, I interpret their existences as close to being features of the world itself. In a similar way to how reading a book points to a meaning beyond itself while retaining the words/sentences as figures directing my perceptions, so do computer interfaces. The context in which my embodied experiences (camera, voice, etc.) exist as extensions of my actions (programs, apps etc.) is also one that contains its own (designed) logic that must be learned and interpreted. Kim mentions that many of the ways "digital objects" function depart significantly from the way the physical

[78] Of course, this disjunction is not pure: embodiment/hermeneutic relations exist on a spectrum of their isomorphic opacity. As one moves along this spectrum, how I relate existentially to the artifact takes on a different character.
[79] Joohan Kim, "Phenomenology of Digital-being," *Human Studies* 24, no. 1-2 (2001): 102.

world works.[80] The synthetic representations of perceptive dispositions in the digital world are unconventional, and this requires me to focus more closely on the technology itself. In other words, how I incorporate the computer into my life is less a matter of transforming my biological forms of interacting with the world and more of an abstract interpretation of some features of the world.

Kim seems to affirm this description:

> The usefulness of individual digital tools is also determined in the context of a totality of useful digital things. For example, the usefulness of a word processing program is determined by a total computing environment which usually consists of operating systems, font programs, spelling and grammar check programs, drivers, macros as well as component programs for the basic functions like saving, opening, formatting, printing, styling and table making. These numerous programs provide the "accommodations" for the word processor.[81]

It is in this way that my relations with digital technology are often of the hermeneutic variety, and my world is existentially transformed in this capacity. When I exist in a world where knowledge is readily available for me to learn via Google and Wikipedia, my perception of things which I do not know (the origin of a particular food item, for example) exist as potentially knowable things, were I to put in the effort of Googling.[82] Another example may be the way my world now contains the ability to transfer money in my bank account via the internet at any given time. Of course, the reduction element of these abilities is that I am now responsible for my ignorance of facts or my bank balance due to these new capabilities, but it is also that my knowledge and financial situations are features of my world that are less connected to my experience of buildings, like libraries and physical bank buildings. In this way, my world is

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[80] Ibid., 94, 107. Of course, Kim is not employing Ihde's framework here, but this description can be examine through this nonetheless.
[81] Ibid., 95.
[82] Of course, this is not to say that searching the internet for information is universally applied to every unknown experience or that the information found is as accurate to me as firsthand experience. The point here is only that this capacity is now incorporated into my intentional arc of perception insofar as I am of the habit of using it.

transformed with the inclusion of these possibilities that are accessible in different ways than before.

> Graham Harmon (talking about the philosophy of Marshal and Eric McLuhan) gives salient examples of this:
>
> Electronic mail enhances rapid communication, discarding the snail-mail pace of aeroplanes and ships that once haunted paper messages. Search engines enhance memory by granting immediate access to forgotten names and facts, which once required months of timid queries to library staff…The price of such enhancement is always 'privation of alternative potentials', since every decision cuts off other potential decisions (obsolescence), and overcommits us to whatever step has been taken.[83]

As I am always in the process of disclosing the world through my interactions with it, every ability that I exercise changes the nature of existence in some way. Incorporating technology in this hermeneutic sense gives me the ability to manipulate more abstract features of how I relate to the world from my digital devices. But again, the digital is not only this for me; it contains many features that correlate with and transform my body. For example, my use of Google Maps is accomplished by 'reading' it in the hermeneutic sense. Nevertheless, this technology offers the ability view the world from the position of the 'Street View', which seems to correlate with 'ordinary' visual perception. Because these two interactions are interconnected, a discussion of my relation with them together is what needs to be described next.

The Ambiguity of Combined Relations

Because our digital technologies are so multifaceted, our interactions with them highlight especially well the concept of multistability. I experience the embodiment of the camera, audio recordings, or communicative features within both the 'real world' context (embodiment) and

[83] Graham Harman, "The McLuhans and Metaphysics," in *New Waves in Philosophy of Technology* 100-122, eds. Jan Kyrre Berg Olsen, Evan Selinger, and Soren Riis (New York: Palgrave Macmillan, 2009).

within the digital environment (hermeneutic). When many different kinds embodiment types relate to each other within a single context (the digital), my intentional being also incorporates the features of both relations differently. Conversely, when I use my digital technology, I often incorporate its features into my embodiment relations. Instead of only relating to all of these embodied features either through their respective ways of interacting with the world (my listening to recorded music and taking pictures being the purview of different abilities) or combining to create a more "'complete' experience,"[84] the combined interaction results in a transformed, novel way of experiencing the world. The 'simple' perceptual transformations of each specific feature remain in such a complex technology, but these combined are not just 'equal to the sum of their parts'. They mutually inform each other to create a different kind of relation altogether.[85]

Here is a simple example to demonstrate: I must unlock my smartphone with touch or sound (embodiment relations) and navigate the series of steps of opening the application within the user interface (hermeneutic relations) in order to access the camera function (embodiment relations), *and* my camera offers itself to my perception of its role as something that can be instantly shared or saved (hermeneutic relations). Now, every piece of technology always has its own conditions for use, its own 'internal logic,'[86] but the fact that all of these embodied features (camera, headphones, voice transmission) are now components of the same internal system of navigation has resulted in the system itself creating the context for embodiment. Digital artifacts are incorporated into my life as features of the world to be interpreted and as tool-like artifacts through which I perceive the world in a different way. My world of relating to cameras is now

[84] Kiran, "Four Dimensions," 129.
[85] See Richardson, "Mobile Technosoma."
[86] All I mean here is that I have to engage with a technology in some specific way that is different in some way than other things.

often combined with my world of conducting financial transactions: I can deposit a check by taking a picture of it. My capacity to discover the identity of a popular song I hear in public is part of the same technology with which I call my parents (or send them the song).[87] All of this is accomplished through the same device (or device type), and thus, my hermeneutic interpretation of my technology becomes also a hermeneutic interpretation of the meaning of my embodied capacities. Conversely, the drive towards transparency which characterizes embodiment relations influences my relations with the virtual space. My computer shows me different ways of channeling my perception back into the world, as seen not only in the rise of smartphones in society but also in the inclusion of better webcams and interconnected platforms like 'smart home' devices. Digital spaces do not always reference a corresponding material entity itself, and websites themselves are not simple representations of physical spaces but rather the spaces where one's perception can terminate and gather new meaning about the world. However, since the digital space incorporates many features to which I embody, my existential relation to my capabilities changes. My capacity to enjoy a song is part of the same capacity to be able to share it; my desire for going to a museum is inextricable from my desire to 'save' that moment in a picture. These examples show some unique stabilities of our relations with complex technologies.

In discussing the different 'levels' in which we live, Merleau-Ponty states that "each of the whole succession of our experiences, including the first, passes on an already acquired spatiality."[88] My intentional arc informs my future with my previous experiences, and this is the condition in which I live regardless of any technologies I use. When considering the experience

[87] SoundHound is an app that can identify most songs just by 'listening' to music playing in world. It can then share the songs or save them to a repository, all within the context of my smartphone.
[88] Merleau-Ponty, *Phenomenology of Perception*, 253.

of being situated in and navigating any particular facet of my life, the nature of my situation carries into this arena the disposition of an incorporated schema. My experiences of interacting with the world in *one sense* informs all the rest. In navigating the virtual realms, my interactions maintain the connection to physical schemas even though they are not embodied, and my digital devices allow this connection itself to be explored through its implementation in their very design.

The existential consequences of my consistent digital interactions are described by Kirk Besmer, and he mentions how virtual interactions in dating games can impact those in the 'real world'.

In discussing some empirical literature, Besmer states,

> …studies indicate that bodily-based behaviors occurring in virtual exchanges with avatars of other people are occasionally carried back into subsequent real-world behaviors. For example, in online dating games, making an avatar more attractive than the user actually is not only boosted the user's self-confidence in social exchanges in the virtual world, but the improved self-perception also persisted outside of the virtual dating game in subsequent real-world social exchanges.[89]

In this example, the experiences in the virtual environment, despite being perceptually quite different from situations involving different technologies, nevertheless transformed the way that the user interacted with the world. While specific artifacts may reshape potential experiences in a fundamental way instead of just adding new capacities, my relations with them are contingent. The conditions which one finds oneself in when accessing is vastly different depending on the specific item due to both personal and design aspects of how the thing is used.[90] Nevertheless,

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[89] Kirk Besmer, "What Robotic Re-embodiment Reveals about Virtual Re-embodiment: A Note on the Extension Thesis," in *Postphenomenological Investigations: Essays on Human/Technology Relations*, eds. Robert Rosenberger and Peter-Paul Verbeek (Lanham: Lexington Books, 2015), 57. Here, he is quoting Blascovich J., and J. Bailenson, *Infinite Reality: Avatars, Eternal Life, New Worlds, and the Dawn of the Virtual Revolution* (New York: HarperCollins, 2011).

[90] Jeffrey A. Clements and Randall Boyle, "Compulsive Technology Use: Compulsive Use of Mobile Applications," *Computers in Human Behavior* 87 (2018): 45-46.

thinking about these transformations with a postphenomenological approach gives us a framework for examining our relationship, and because no single trajectory adequately describes the way technology is shaping our behavior. Our interactions have consequences, but our condition is malleable as well.

Conclusion

One way of characterizing this situation with complex technologies is with the idea of Augmented Reality (AR). Pokémon Go and Google Glass are both popular examples or technologies that inscribe hermeneutic features directly onto mediated perceptions. Verbeek and Rosenberger have categorized this augmented reality relation. They use Google Glass, a 'smart' pair of eyeglasses as an example:

> "When using Google Glass, people both have an embodiment relation with the Glass itself, and a hermeneutic relation with its screen that offers a representation of the world. Therefore it offers not one, but two parallel relations with the world. Schematically:
> (I - Technology) → World
> ↘ (Technology – World)
> The intentionality involved in such "augmentation relations" can be indicated as "bifurcated": there is a split in people's directedness at the world, because two parallel fields of attention emerge."[91]

Many of the previous examples given concerning the use of combined embodiment/hermeneutic relations could actually be categorized in this way. What is important about AR technologies is that the hermeneutic aspects are combined with the embodiment from the start. Their interrelated capacities are shown explicitly to be what they are, and my relations with them are existentially distinct in that, as seen in the above model, there is an enigma position between both myself/technology and technology/world. AR seems to build the ambiguity of the distinction

[91] Robert Rosenberger and Peter-Paul Verbeek, "A Field Guide to Postphenomenology," in *Postphenomenological Investigations: Essays on Human/Technology Relations*, eds. Robert Rosenberger and Peter-Paul Verbeek (Lanham: Lexington Books, 2015), 22.

between embodied and hermeneutically-embodied technologies explicitly into the design of the artifact.

Galit Wellner has written about how the smartphone has become the primary method of reaching "augmented space."[92] This space is a sort of interactive hybrid that collaborates with many technologies.

> Wellner shows the difference between virtual reality (VR) and (AR):
>
> Whereas virtual reality attempts to reproduce visual and auditory perceptions, augmented reality returns to the real world and provides no more than a visual or vocal addendum. This addendum is structured as an overlay that is 'the layering of dynamic and context-specific information over the visual field of a user,' or over the vocal field."[93]

In examining the kinds of interactions I have not just with smartphones, but computer technology in general, this characterization seems accurate for many of my relations. My hermeneutic interaction with digital devices seen in the examples considered in this paper often incorporate the 'real world' instead of simply remaining circumscribed in the digital space. While Wellner considers the smartphone's mobility as a crucial factor of its capacity for AR, I would contend that the complex computers that we have function as AR without this extensive mobility.

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[92] However, she does expand the definition of smartphone. Wellner has also designated some transformations in the screen-design cellphone technologies as indicative of their becoming a 'quasi-other'. Under this conception, the cellphone is to me an opaque subject-like being to which I relate. While this seems correct concerning some levels of automation in digital tech (like algorithmic content regulation of some online experience or the way programs and applications unfold), the experience of the screen itself as a 'quasi-face' does not seem entirely accurate. For one, while the interface of the screen certainly offers a sort of 'interiority' that puts its parameters into special focus (especially considering its backlit, animated character), my manipulation of its features directly is not analogous to a face. My relation to others is one in which they are viewed as an opaque entity which relates equally to myself. Considering how I must navigate it to understand it and can even learn about various aspects of its design and code, I relate to it more often as a hermeneutic feature. Another obvious fact about my use of the screen is that it is extensively text-based. I can try to know the meaning of a webpage's contents by reading the words written all over it despite not always knowing the author, and interpretive relations like this are more accurately characterized by the hermeneutic framework. Wellner's analysis here is correct in that some features of the smartphone contain this 'quasi-otherness', but they are one kind of feature among many in the hermeneutic digital world. See Galit Wellner, "The Quasi-face of the Cell Phone: Rethinking Alterity and Screens," *Human Studies* 37, no. 3 (2014): 311-12.

[93] Galit Wellner, "No Longer a Phone: The Cellphone as an Enabler of Augmented Reality," *Transfers* 3, no. 2 (2013): 72.

Computers are almost ubiquitous, and many of the tasks I want to accomplish can be done so from any computer. Because the artifacts are also interpreted hermeneutically, they are features of the world in which the space I occupy is made meaningful. Wellner says that "Through embodiment relations, the smartphone offers new understandings of the world. It renders the environment more intelligible through the new embodiment (and hermeneutic) relations it offers."[94] In this way, computers and smartphones, because they offer complex interactions between embodiment relations and hermeneutic ones, can be understood as facilitating AR.

The potential/anticipatory[95] structure of perception is influenced by the use of these complex digital artifacts by giving me additional way of interacting with the world. While the existence of the world is indubitable, the nature of one's navigation of it can be altered through the discursive relationship of consciousness and its objects with the body. When I interact with my phone or computer, my existence seems different in that I can always turn the devices off do other things. But a disjunction between the two worlds, one in the physical world and the other of my digital interactions, is not a disjunction at all. Furthermore, the explicit integration of two different ways of relating to technology provides a positive sense of some new ways of interacting with the world in general.

Merleau-Ponty writes,

> Whether a system of motor or perceptual powers, our body is not an object for an 'I think', it is a grouping of lived-through meanings which moves towards its equilibrium. Sometimes a new cluster of meanings is formed: our former movements are integrated into a fresh motor entity, the first visual data into a fresh sensory entity, our natural powers suddenly come together in a richer meaning, which hitherto has been merely foreshadowed in our perceptual or practical field, and which has made itself felt in our experience by no more than a certain lack, and which by its coming suddenly reshuffles the elements of our equilibrium and fulfills our blind expectation.[96]

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[94] Ibid., 81.
[95] This refers back to myself being an 'I can'. When I act, I am anticipating my abilities (which are hitherto potential abilities).
[96] Merleau-Ponty, *Phenomenology of Perception*, 153.

Our multistable relations with technology can account for different 'equilibriums' that exist as stable 'powers' in our interactions with the world, all depending on how we incorporate them into our lives. There is no single way for us to interact with technology. Digital technologies give us the ability to have embodied experiences, store or share them, read and manipulate them, or inscribe our capacity to read onto embodied perceptions to create a synthesis. While we cannot generalize about placing values onto the use of technologies, the possible transformations I have outlined can help to discourage unwarranted bleak generalizations about technology as a whole: they can also give our world a richer meaning. Given our multistable relationship with every artifact and the way that these relations can inform our very subjectivities, transforming the world into 'standing-reserve' seems to be only one possible outcome among numerous others.[97] Our condition is not guaranteed, but it is one that we commit to every time we use our devices which ultimately characterizes our existence as being composed of *certain* actions and not others.

In this paper I have examined two works of phenomenology that relate to technology as well as some challenges from poststructuralism, given examples of how postphenomenological descriptions can apply to digital technology, and shown how these devices often function as complex transformations of our experiences by considering that we often relate to them through both embodiment and hermeneutic relations. With the inclusion of AR into our lives, perhaps the consequences of using digital technologies can be explicitly designed into the artifacts themselves, giving us awareness of how our actions compose the nature of our existence in the world.

[97] See Heidegger, "Question," 310.

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