

“We act blindly, and such is our condition that even the light of knowledge becomes a means of our blindness.”<sup>1</sup>

It’s provocative to pose the title of a paper with a dualistic posing, i.e., cultural flourishing or human demise. It automatically activates what Alfred North Whitehead termed an “affirmation-negation” contrast in the ongoing process of an unfolding world. In his organic ontology, not everything experiences this type of contrast. Human entities—adept in high order complexity of processing—have consciousness, or what can be thought of as “reflective experiencing.” Whitehead defines consciousness specifically as “how we feel the affirmation-negation contrast,” which is a process that is “integrated with the potentialities which illustrate *either* what it is and might not be, *or* what it is not and might be.”<sup>2</sup> We hold for later discussion the presence of consciousness found elsewhere in the cosmos—UFOs/UAPs, aside.

So, this dualistic posing activates our “affirmation-negation contrast” imaginings. It lures us to wonder, “Which is it?” as if only one side of the dualistic posing can win. World wars have begun over such musings; Inquisitional-style stake burnings have ensued; Avengers movies, dualistically themed, have generated \$2.6 billion in gross income<sup>3</sup>. It *is*, needless to say, quite powerful. As to this paper, this type of posing is used only to invoke wonder and the imagining of *what is* and *what might be*, and to apply those musings to the world of AI. For reasons to be elucidated shortly, Whitehead’s process philosophy will be our guide and North Star.

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<sup>1</sup> Hans Jonas, “Seventeenth Century and After: The Meaning of the Scientific and Technological Revolution,” in *Philosophical Essays: From Ancient Creed to Technological Man* (Englewood Cliffs: Prentice-Hall, Inc., 1974), 74.

<sup>2</sup> Alfred North Whitehead, *Process and Reality*, ed. David Ray Griffin and Donald W. Sherburne (New York: The Macmillan Company, 1929), 243.

<sup>3</sup> “Box Office Mojo: Marvel Cinematic Universe,” IMDbPro, accessed November 27, 2024, at [https://www.boxofficemojo.com/franchise/fr541495045/?sort=grossToDate&ref\\_=bo\\_fr\\_resort#table](https://www.boxofficemojo.com/franchise/fr541495045/?sort=grossToDate&ref_=bo_fr_resort#table). Lifetime Gross Amounts: Avengers, Endgame, \$858M; Avengers, Infinity War, \$678M; The Avengers, \$623M; Avengers, Age of Ultron, \$459M.

## Introduction

Artificial Intelligence (AI) has become the latest phenomenon in technology that is being applied across scientific, medicinal, artistic, commercial, and other business productivity-related areas. It is being heavily supported by major corporations and governments as a crucial and necessary innovation. Its significance is underscored by indicators such as OpenAI, the creator of ChatGPT, being valued at \$150 billion almost overnight<sup>4</sup>, and companies like Nvidia, claiming to be the “world leader in artificial intelligence computing,” benefitting from an exponential 2700% stock price increase over the past five years<sup>5</sup>.

We do not know AI’s long term impact on the world. Just as the scientific revolution, set in motion by the discovery of the earth moving about the sun, shifted the 16th century worldview and yielded myriad repercussions still reverberating through our current century, we seem at the threshold of another huge paradigm shift in human consciousness. AI will presumably not be the dominant catalyst of this shift. There are clearly other significant influential factors, such as wars across multiple continents, widespread famine, political unrest worldwide, and the now daily-felt impingement, if not outright horrific catastrophes, of the environmental crisis. Yet, if we ultimately, using AI, turn the reigns of our decision making over to intellectual surrogates of our own making—even if they are only assisting and guiding our thought processes along—we must be cautious of their inherent and intrinsic impact. The dazzle and momentum of AI’s multi-level promise, e.g., capitalistic gain, militaristic advantage, scientific supremacy, extended lifetimes,

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<sup>4</sup> Cade Metz, Mike Isaac, Tripp Mickle, and Michael J. de la Merced, “OpenAI’s Fund-Raising Talks Could Value Company at \$150 Billion,” *New York Times*, September 11, 2024, <https://www.nytimes.com/2024/09/11/technology/openAI-fund-raising-valuation.html?searchResultPosition=38>.

<sup>5</sup> “NVDA,” Yahoo Finance, accessed November 5, 2024, <https://finance.yahoo.com/quote/NVDA/>.

cosmic colonialism, etc., cannot be contained. AI can only be worked with and potentially molded, to yield human and planetary sustainability and good. This seems a leap of faith.

Consideration of this issue leads inherently to the hard problem of consciousness, a vital topic of discussion and great dispute among philosophers of mind. For if there is truly only the physical brain, with consciousness's phenomenological experiencing and perceiving soon to be explained by neuroscientists' discoveries of the brain's intricate functioning; or if consciousness is deemed real, but frosting-like, in the epiphenomenalism of its workings; or if consciousness is found only within the eye of the beholder with that which is held in its gaze incapable of being truly known, then we are left with a trusting of AI as somehow representative of the whole of human intelligence and consciousness. This view allows us, even encourages us, to give ourselves away to it—knowingly or unknowingly.

It seems important to provide a more holistic worldview that avoids the pitfalls of AI's scientism lineage, which is inherently reductionistic, sees nature (including humans) as mechanistic, and treats time only in measurable, static, and cinematographical bursts. This lineage also encompasses, as will be discussed, a number of other hidden influences that have led us, somewhat unwittingly, to the current planetary crisis. Alfred North Whitehead's process ontology is conscious of and opposes these influences, which he believed were or led to misinterpretations of reality. With Whitehead's process philosophy as ground, this paper's intention is to explore AI's usefulness within a larger context, to make clear its inherent limitations, and to suggest guard rails that might help keep us from giving ourselves away to it. Perhaps it is not a question of flourish or demise, but rather some mix or integration of what could be viewed as dipolar potentialities.

## The Scientific Kick Off

Of course, it is well known that the scientific revolution was a pivotal time in Western history. It is included as part of this discussion for three reasons. First, because it reminds us of how a seemingly isolated incident or ad hoc discovery can have reverberations that shift behaviors, beliefs, attitudes, and values for years to come. For example, it's hard to imagine that a 16-year-old Steve Jobs' and a 21-year-old Steve Wozniak's pattering with electronics in a Los Altos, California garage would lead to AI generated Google-search findings on a worldwide digitized internet some fifty years later.

Secondly, the scientific revolution is discussed because it turned the 16th century worldview on its head in significant and multi-faceted ways. That turn, in turn, made the Steves' explorations possible. It also instilled assumptions as truisms that later led to the current environmental crisis, while simultaneously burying into oblivion crucial truths that need reconsideration and resurrection.

And lastly, the heliocentric finding revealed by Copernicus, enhanced by Kepler, and taken up by Galileo came at huge cost. These men *knew* something that explosively violated known beliefs. No-one, especially the Church, wanted to hear about it. And for them to persist in talking and publishing put their very lives at stake. Let us not forget that the brilliant Galileo survived the Roman Inquisition but was put under house arrest for the last nine years of his life.

With the first appearance of humans' "thinking about thinking"—which Robert Bellah terms as the inception of the axial age, an as-of-then-worldwide phenomenon that began in Greece around 500 BCE<sup>6</sup>—there was still a pervasive sense of enchantment and aliveness to

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<sup>6</sup> Robert Bellah, *Religion in Human Evolution* (Cambridge, Mass: The Belknap Press of Harvard University Press: 2011), 268.

everything in the world. For Aristotle knowing was the domain of the world-soul which infiltrated all things. There was no individual knowledge, no “subjective locus of knowing,” and no objective standard of knowledge.<sup>7</sup> Theories did not need to have practical application. As Anderson Weekes explains:

What seems to make all the difference between modern and Hellenistic outlooks is, therefore, a very different distribution of theory and practice. ...the epistemological crisis at the focus of Hellenistic philosophy was almost entirely theoretical, while the remedy sought was essentially practical—cultivating equanimity and peace of mind in the face of unanswered questions.<sup>8</sup>

The Copernican turn, in 1543, kicked off the scientific revolution that set in motion (no pun intended) questions that challenged the existential core of life itself and began taking theory into practice. Hans Jonas in his poignant essay, “Seventeenth Century and After: The Meaning of the Scientific and Technological Revolution,” underscores the revolution’s multivalent nature that brings flourish to the reductionistic way in which it is often viewed. According to Jonas, the discovery of the earth moving about the sun instigated questions about: 1) religious biblical truth; 2) circles as indicative of God’s perfection; 3) nature being poetic, inherently alive, and as a doorway to *knowing* God; 4) hermeticism<sup>9</sup> as a valid source for explaining the world; 5) magic (either black or white) as a parallel truth to erudition; 6) objective standards for discerning truth; 7) God (the Church) as the final arbiter of truth; 8) the connection between body and soul; 9) the

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<sup>7</sup> Anderson Weekes, “Consciousness as a Topic of Investigation in Western Thought,” in *Process Approaches to Consciousness in Psychology, Neuroscience, and Philosophy of Mind*, ed. Michel Weber and Anderson Weekes (Albany: State University of New York Press, 2009), 91 & 99.

<sup>8</sup> Weekes, “Consciousness as a Topic,” 101.

<sup>9</sup> Note: Hermeticism refers to a mix of traditions brought together by the rediscovery of the Hermetic writings in the Renaissance and include alchemy, magic, Neoplatonism, mysticism, Rosicrucianism and other esoteric traditions. Hermetism refers to the philosophical schools of late antiquity that produced the *Corpus Hermeticum* and other related texts.

providential disposition of the planets; 10) plants and nature in general having teleological purpose; and 11) the wisdom of the ancients in light of newness, novelty, and progress.

Galileo (1564-1642), in *The Assayer*, shines a bright light on a new type of reason that he is intent on propagating that stems from earlier Greek themes<sup>10</sup> about the importance of mathematics:

Philosophy is written in this grand book – I mean the universe – which stands continually open to our gaze, but it cannot be understood unless one first learns to comprehend the language and interpret the characters in which it is written. It is written in the language of mathematics, and its characters are triangles, circles, and other geometrical figures, without which it is humanly impossible to comprehend a single word of it... without these, one wanders about in a dark labyrinth.... nature takes no delight in poetry.<sup>11</sup>

René Descartes (1596-1650), a slightly younger contemporary of Galileo, was desperate to devise criteria for certainty in knowledge and the achievement of stability in the intellectual world.<sup>12</sup> He had inherited the unsettled chaos of the 16th century *episteme* — a time rich in hermeticism and resemblances<sup>13</sup>, skepticism ignited by the discovery of the Hellenistic writer Sextus Empiricus and the translated dissemination of his thoughts by Michel de Montaigne in 1580<sup>14</sup>, and social uncertainty due to the Reformation<sup>15</sup> and its challenge to the pope’s authority. His philosophical project, along with those of fellow French Machinists, strove against

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<sup>10</sup> Legend has it that the motto of Plato’s Academy in Athens written above its main entrance was “Let no one ignorant of geometry enter.”

<sup>11</sup> Galileo Galilei, *The Assayer* (1623), trans. Stillman Drake, Stanford University, accessed November 27, 2024 at <https://web.stanford.edu/~jsabol/certainty/readings/Galileo-Assayer.pdf>.

<sup>12</sup> Carolyn Merchant, *The Death of Nature: Women, Ecology, and the Scientific Revolution* (San Francisco: Harper & Row, 1983), 194.

<sup>13</sup> Michel Foucault, *The Order of Things* (Routledge Classics, 2001), 33.

<sup>14</sup> Weekes, “Consciousness as a Topic,” 91-92.

<sup>15</sup> The Reformation dates from 1543 to 1687.

“naturalism, vitalism, and animistic magic”; replaced the sense of world spirit and soul with a mechanical “corpuscular ether”; and in reaction to secret sects, such as the Rosicrucians, did away with any sense of individual passion and religious interpretation in favor of “self-control, temperance, reasonable judgment, and sovereign law.”<sup>16</sup>

Descartes turned to mathematics, like Galileo, as the key to understanding. “God sets up mathematical laws in nature as a king sets up laws in his kingdom,”<sup>17</sup> he wrote to fellow machinist, Mersenne, in 1630. His was a rational, quantitative approach of numbers, measurement, and ratios by which reality could be pinned down and visualized. It is no coincidence that his *Discourse on the Method* and *Geometry* manuscripts were both published in the same year (1637). In his now-famous discourse, he asserts two notions of duality: the distinction between mind and body, and the distinction between humans/the human mind and all of nature.

Descartes’s *Meditations of First Philosophy* underscores how intent he was about questioning every thought and perception to devise some objective criteria of knowledge. To this end, he placed himself in the meditative shackles of disavowing and doubting everything (except God). Pushing himself to the edge of a psychotic break through his own rigor and determination, he seemed ecstatic when he concludes “*ego sum, ego existo* — “I am, I exist.” His earlier stated first principle in *The Method*, “*je pense, donc je suis* — I am thinking, therefore I exist,” does not seem to capture this meditative rapturous reverie.<sup>18</sup> In either case, however, he fell upon a

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<sup>16</sup> Merchant, *The Death of Nature*, 195.

<sup>17</sup> René Descartes, "Lettre a Mersenne," April 15, 1630, *Oeuvres*, vol. I, 145, quoted in Merchant, *The Death of Nature*, 205.

<sup>18</sup> Matthew D. Segall, “Altered Consciousness After Descartes: Whitehead’s Philosophy of Organism as Psychedelic Realism,” in *Philosophy and Psychedelics* (Unpublished, 2024), 198-201.

subjective locus for his mathematical objective criteria that set him apart from nature, other humans, and the world around him.

The idea of consciousness as a personalized state or interior domain of reflection, without a moral or ethical connotation, did not come into existence until the 17th century.<sup>19</sup> Anderson Weekes notes that Descartes, although he did not use the word *consciousness*<sup>20</sup>, was the first to identify subjective thinking as an attribute of *something*, a *something* such as the mind/soul/spirit defined by an awareness of its own thinking. As Descartes put it, “that which thinks is not nothing.”<sup>21</sup> Ralph Cudworth, an esteemed member of the Royal Society, used the word in 1678 as a mass noun, i.e. “something *has* consciousness.” And later, in 1689, John Locke, in *An Essay Concerning Human Understanding*, writes of consciousness as an entity, and even coins the neologism *self-consciousness*. In 1714, the polymath, Gottfried Wilhelm Leibniz, used the word as a reflective knowing of one’s internal state (“...*et l’Apperception qui est la Conscience, ou la connoissance reflexive de cet éstat interieur.*”)<sup>22</sup>

Thus, by the late 17th/early 18th centuries, it was generally held that the mind had its own nature and was perceived as being an isolated entity separate from the world. Yet, a personalized mind was not enough to ascertain generalizable truths through its sensing and experiencing. The mind’s speculations and perceptions needed to be tested in order to be applied to the world at large.

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<sup>19</sup> Weekes, “Consciousness as a Topic,” 75.

<sup>20</sup> Weekes, “Consciousness as a Topic,” 88-89.

<sup>21</sup> René Descartes, 1964–1976, *Œuvres de Descartes*, vol. 7, ed. Ch. Adam and P. Tannery, revised ed. (Paris: Vrin/C.N.R.S., 1964-1976, 175, quoted in Weekes, “Consciousness as a Topic,” 104.

<sup>22</sup> Weekes, “Consciousness as a Topic,” 89 & 81. Translation is “and Apperception which is Consciousness, or the reflexive knowledge of this inner state.”



The experimental lab or workshop solved this problem. It had already been put in motion earlier by Francis Bacon who first envisioned it as part of a new science of inductive reasoning.

He writes in his pivotal work *Ovum Organum* in 1620:

We attain knowledge less through sensation or apparatus than through experiments. For experiments are far more exact than sensation, even when the latter is supplemented by excellent apparatus. Of course we are speaking of experiments that have been knowledgeably and skilfully designed and adapted to the investigation of the point at issue. For this reason we attach little weight to direct, first-hand sensory perception, but contrive that while sensation may judge of the experiment it is the experiment that passes judgement upon the fact.<sup>23</sup>

The workshop, that parsed out and examined one thing at a time (eliminating extraneous variables) and used appropriate tools for scrutinizing nature, was demanded by Galileo for the entirety of natural philosophy.<sup>24</sup> It was cemented in place by Newton's own stance on experimentation and inductive reasoning in the *Principia Mathematica* published in 1687:

*In experimental philosophy we are to look upon propositions collected by general induction from phenomena as accurately or very nearly true, notwithstanding any contrary hypotheses that may be imagined, till such time as other phenomena occur, by which they may either be made more accurate, or liable to exceptions. This rule we must follow, that the argument of induction may not be evaded by hypotheses.*<sup>25</sup>

In his own way, Immanuel Kant philosophically furthered the cause. With his publication of the *Critique of Pure Reason* in 1781, one interpretation of its import is that personal subjectivity and the bifurcation of nature, awakened by Descartes, ripened to fuller fruition. Kant's self-proclaimed Copernican revolution of philosophy was intended to circumvent the

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<sup>23</sup> Francis Bacon, *Distributio operis*, Works I, 15 (var), 1620, quoted in Samuel Taylor Coleridge, "The Friend," in *The Collected Works of Samuel Taylor Coleridge*, ed. Barbara E. Rooke (Princeton: Routledge & Kegan Paul, 1969), 489. Note: The original Latin translated by Coleridge.

<sup>24</sup> Adam Frank, Marcelo Gleiser, and Evan Thompson, *The Blind Spot: Why Science Cannot Ignore Human Experience* (Cambridge: The MIT Press, 2024), 39.

<sup>25</sup> Sir Isaac Newton, *Newton's Principia. The Mathematical Principles of Nature Philosophy*, trans. Andrew Motte (New York: Daniel Adee, 1845), 385.

skeptics, such as John Locke and David Hume, who were undermining the Enlightenment's crucial methodical need to understand and to know. Hume did not even believe that there was cause and effect—only habits imprinted upon a blank slate mind. In addition, Kant sought to limit the unfounded super-sensible speculations of the Dogmatists, such as Christian Wolff and Ludwig Friedrich Otto Baumgarten-Crusius, as well as to counter the pure Rationalists, such as Gottfried Wilhelm Leibniz, who held that objects acted upon the mind from an out-there kind of heavenly space.

For Kant, reality existed solely from the vantage point of a subject in relation to an object-filled external world. These objects, perceived in a priori-given representations of space and time, could be perceived in form only through a priori categorizations (i.e., quantity, quality, relation, and modality). Yet, they could not be known in and of themselves. Kant's intention was to save metaphysics as a bona-fide science. Yet, another interpretative view is that he enhanced, with great sophistication and nuance, the subjectivity of man alongside an even more pronounced bifurcation of nature.

### **"The Blind Spot"**

In *The Blind Spot: Why Science Cannot Ignore Human Experience*, a recently published book written by two physicists (Adam Frank, Ph.D. and Marcel Gleiser, Ph.D.) and a philosopher (Evan Thompson, Ph.D.), the history and impact of the centuries leading up to our current environmental, political, and social worldviews and crises are laid out. It specifically warns of the *Blind Spot*, a reverberating background that has become the air that we breathe, wherein theoretical assumptions from the aforementioned scientific revolution spiraling into those of classical physics, have insidiously become held as absolute truth. Once natural

philosophers moved from trying to understand the metaphysical purpose of God as revealed by nature, the focus turned to explaining the mechanical *how* of it all. As Frank et al. explain:

In the absence of such a framework [metaphysical purpose], the metaphysics of the Blind Spot—an assumed objective ontology of mathematizable matter moving blindly in the world—eventually slipped into place as the de facto metaphysics of nature and philosophy of science.<sup>26</sup>

<b>Scientific Revolution</b>	<b>Classical Physics</b>	<b>“The Blind Spot”</b>
Mathematics the measure of reality and final knowledge Descartes’ analytic geometry	Reality described mathematically Reification of mathematical entities (e.g., mathematical abstraction imaged in space)	Surreptitious substitution Fallacy of misplaced concreteness Reification of a structural invariant of experience Amnesia of experience
Two types of reality: 1) Mind versus (separate from) body 2) Mind versus (separate from) nature Primary & secondary qualities (Galileo)	Microphysical entities (atoms, light waves) objectively exist; whereas perceptual qualities are subjective experiences & exist in the mind	Bifurcation of Nature
Self-consciousness is realized (1st person experiencing) Separation between objective reality and subjective experience	Science as perfectly objective and universal, “untainted by human experience”	Surreptitious substitution Amnesia of experience Bifurcation of Nature
Experiment (the lab) has legitimacy over experience (the world)	Reductionism (Leaves things out) Objectivism	Fallacy of misplaced concreteness Reification of a structural invariant of experience
Nature as form/mechanistic; non-teleological; non-feeling	Objectivism	“Vacuous actuality” Bifurcation of Nature
God as the source of all knowledge; God as primary cause	God as primary cause; God’s laws of nature as secondary cause God’s “absolute perspective”	“View from nowhere” (An objective distanced observer out there somewhere viewing things at arm’s length)

Figure 1.

The chart above (Figure 1.) details the beliefs and assumptions initiated by the scientific revolution, evolving into those in classical physics<sup>27</sup>, and culminating in the fallacies descriptive of the Blind Spot. These include notions such as the bifurcation of nature, surreptitious

<sup>26</sup> Frank, Gleiser, and Thompson, *The Blind Spot*, 38-39.

<sup>27</sup> Frank, Gleiser, and Thompson, *The Blind Spot*, 48-50.

substitution, the fallacy of misplaced concreteness, and the amnesia of experience. A recent personally lived experience helps bring these blind spot fallacies to life:

A friend came to visit from out of town. He wanted to visit an art gallery in Soho which Google maps indicated was a ten-minute walk from my apartment. Through the experience of living and walking in New York City for more years than I dare count, I knew this to be completely erroneous. Walking from my apartment at Fifth Avenue and 8th Street to a gallery on 10th Avenue and 20th Street would take at least twenty-seven minutes. The commonsense knowledge of every New Yorker is that it takes roughly one minute to walk an uptown block, and three minutes to walk a crosstown block. Plus, it was Saturday so that the sidewalks would be more populated making a quick walk near impossible. Yet, my friend was adamant. It had to be ten minutes because Google said so.

Let's examine this encounter. The Cartesian-based Google map with streets and the best walking route was mathematically derived plotting xy coordinates on a two-dimensional plane. Compared to physical sidewalks, birds, people strolling, and trees reaching upward into a three-dimensional sky, we have an example of the bifurcation of nature, i.e., two distinctly different portrayals of reality. The mathematically calculated idealized "ten minutes" is a surreptitious substitution, i.e., "the replacement of concrete, tangible, and observable being with abstract and idealized mathematical constructs"<sup>28</sup>. It also represents a fallacy of misplaced concreteness in that my friend "believed" it to be true even though it was an abstraction substituted for the actual experiencing of the walk itself.

This example also illustrates the reification of a structural invariant of experience. Google clearly had developed its mathematical formula for calculating the length of the walk based on something. Perhaps it was a timed experiment of 100 people, chosen to be representative of adults living in the United States at large, walking normally on a flat treadmill for three minutes,

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<sup>28</sup> Frank, Gleiser, and Thompson, *The Blind Spot*, 24.

and then averaging the distance they each had gone to achieve estimated miles per hour. This average—generated in a lab where there was no wind, sunshine, birds to distract, people walking four abreast to block passage—is only a “distilled residue” of the actual experience of walking these blocks in New York City on a Saturday morning in November.

Taken together, these fallacies stacked one on top of the other, contribute to amnesia of experience. My friend whose actual walk took 30 minutes might in future return and once again check Google for the timing of a walk. He might or might not remember the one time it took three times as long as Google asserted. Subjective experience is lost or discounted; only Google’s abstracted and objectified reality remains.

### **Sidestepping the Blind Spot**

Alfred North Whitehead, mathematician and philosopher, was well aware of these blind spot fallacies which he believed led to misinterpretations of reality. He developed his own organic ontology in avoidance of their inherent danger and insidiousness. His philosophy was literally developed *in protest* of the bifurcation of nature:

The theory of ‘prehensions’ embodies a protest against the ‘bifurcation’ of nature. It embodies even more than that: its protest is against the bifurcation of actualities. In the analysis of actuality the antithesis between publicity and privacy obtrudes itself at every stage. There are elements only to be understood by reference to what is beyond the fact in question; and there are elements expressive of the immediate, private, personal, individuality of the fact in question. The former elements express the publicity of the world; the latter elements express the privacy of the individual.<sup>29</sup>

For Whitehead, process philosophy is a feeling and sensing philosophy. What we see is in nature, “the red of the sunset is as much a part of nature as the molecules and light waves by

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<sup>29</sup> Whitehead, *Process and Reality*, 289.

which scientists explain it.”<sup>30</sup> In other words, the red of the sunset is not a perceptual manifestation of the mind, as in Galileo’s secondary qualities of things. It is real. It is an unfolding of nature that we are and that we also experience.

In Whitehead’s process philosophy there is no surreptitious substitution, fallacy of misplaced concreteness, amnesia of experience, nor view from nowhere. His cosmology is one that rests upon that which is organic and real. Although it comprises a complex philosophical construction, everything is based on the unfolding of experiences and occasions. The only abstract facet of his philosophy might be found in the idea of God. Nonetheless, his conception of God is not as a transcendent creator and super sensuous being, but as a creature of creativity itself. Whitehead’s God does not operate outside the system but is part of it and provides a lure toward a subjective aim or *appetition* among an orderly array of pure potentials.

In addition, process philosophy does not include abstractions from the laboratory that do not exist in nature or in experience (i.e., reification of structural invariants). *Vacuous actualities*, or “things” incapable of experiencing, fall outside the definitional realm of Whitehead’s philosophy. Experiencing in process philosophy may be reflective and conscious, or non-reflective and unconscious, but everything is built around experiencing.

### **Philosophy of Mind**

Everyone experiences the consciousness of being awake, grief-filled and jubilant emotions, the redness of a rose, and the mouthwatering taste of a strawberry. Yet, philosophers of mind ask, “Where does such subjective experiencing reside in the physical world and why does it

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<sup>30</sup> Alfred North Whitehead, *The Concept of Nature* (Cambridge: Cambridge University Press, 1920), 29.

even exist?” This is the hard problem of consciousness, a vital and often disputed topic among them. There are a host of theories about it. (See Figure 2. below.)

The Eliminative Materialists and Physical Emergentists evade the issue through their belief that consciousness and subjective experience are simply part of the neurophysiology of the brain. They are waiting for advances in neuroscience to explain it. A specific problem arises for the Physicalists/Materialists called the explanatory gap. Physical processes are quantitative and viewed in the third person; subjective processes are qualitative and viewed in the first person. The only way to avoid this third person-first person gap is to assume that the subjective experience is merely a hidden nature of the physical world.

Scientific Revolution	Classical Physics	Philosophy of Mind	“The Blind Spot”/“Hard” Problem
Mathematics the measure of reality and final knowledge Descartes’ analytic geometry	Reality described mathematically Reification of mathematical entities (e.g., mathematical abstraction imaged in space)	Materialism (physicalism)	Surreptitious substitution Fallacy of misplaced concreteness Reification of a structural invariant of experience Amnesia of experience ***** Explanatory Gap (1st & 3rd person)
Two types of reality: Mind versus (outside of) body Mind versus (outside of) nature	Microphysical entities (atoms, light waves) objectively exist; whereas perceptual qualities are subjective experiences & exist in the mind	Dualism (Substance Dualism & Property Dualism)*	Bifurcation of Nature ***** Epiphenomenalism Systemic Overdeterminism
Self-consciousness is realized (1st person experiencing) Primary & secondary qualities Separation between objective reality and subjective experience	Science as perfectly objective and universal, “untainted by human experience”	Epiphenomenalism Dualism ***** Panpsychism (reaction against these views)	Surreptitious substitution Amnesia of experience Bifurcation of Nature
Experiment (the lab) has legitimacy over experience (the world)	Reductionism (Leaves things out) Objectivism	Materialism (physicalism)	Fallacy of misplaced concreteness Reification of a structural invariant of experience
Nature as form/mechanistic; non-teleological; non-feeling	Objectivism	Materialism (physicalism) ***** Panpsychism (reaction against these views)	“Vacuous actuality” Bifurcation of Nature
God as the source of all knowledge; God as primary cause	God as primary cause; God’s laws of nature as secondary cause God’s “absolute perspective”	Materialism (physicalism) Dualism	“View from nowhere”

\* Substance dualism is subject/object, Cartesian dualism; Property dualism is a single, physical substance (e.g., the brain) that possess both physical and mental properties

Figure 2.

The Dualist philosophers<sup>31</sup>, see physical and mental properties as separate and independent of one another. Like the Physicalists/Materialists, they avoid the hard problem of consciousness through their belief that everything has a physical cause. As such, consciousness has nothing left to do, and no inherent meaning. Thus, subjective experiencing is epiphenomenal (i.e., has no causal impact), or is systematically overdetermined (i.e., the physical realm already does it all, so it plays a redundant role at best).

Among the Analytic philosophers, there has been a movement afoot toward panpsychism—the belief that consciousness is a fundamental characteristic of all nature. Panpsychism skirts the hard problem of consciousness through its underlying premise of consciousness itself, and offers various theories to explain where, why, and how consciousness plays a role. However, a number of issues arise among Analytic philosophers as they theorize about the nature of omnipresent consciousness(es).

For example, some believe consciousness exists and begins at the micro-level of particles and atoms. The question then arises as to how these entities, each with their own individual consciousness, combine to achieve a unitary consciousness, of say, a person or animal. By contrast, those believing in cosmopsychism are unsure how a single, universal cosmic consciousness is fragmented into individual consciousnesses without there being an awareness of this larger cosmic mind. David Chalmers, who resurrected the consciousness question and delineated between its “hard” and “easy” facets in the mid-1990s<sup>32</sup>, has also thought through

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<sup>31</sup> Note: There are two types of dualist philosophers. Substance dualists see dualism stemming from Descartes as subject vs. object; Property dualists think of dualism in light of things like the brain having both physical and mental properties.

<sup>32</sup> David J. Chalmers, “Facing Up to the Problem of Consciousness,” *Journal of Consciousness Studies* 2, no. 3 (1995): 200-201.



numerous other issues in the context of panpsychism. These are far too extensive to be included here.<sup>33</sup>

### **Whitehead's Process Philosophy as North Star**

Whitehead's process ontology, already introduced, is sometimes alluded to as panpsychism, and as such skirts the hard problem of consciousness. Yet, taken in its purest form, it is at best a subset of panpsychism. The constitutive panpsychic view, where all has consciousness, drives philosophers of mind into focused, yet somewhat longwinded discussions about panpsychism's overall credibility and associated issues such as emergentism and the so-called combination problem. These *problems* seem not only unresolvable but, on judgment, to distract from, more than facilitate, any kind of meaningful philosophical guidance for our current and future worldviews and ethical decision making.

David Griffin, philosopher and co-founder of the Center for Process Studies, contends that Whitehead himself rejected an association with *panpsychism* because he did not agree with its implication that all things are psyches and thus have "high-grade," consciousness mentality.<sup>34</sup> When referring to Whitehead's process philosophy, Griffin instead assigns the term panexperientialism. Whitehead, of course, did not know of or use this nomenclature himself, but Griffin claims that based on process philosophy's precepts, Whitehead would have been accepting of it.<sup>35</sup> Further, Griffin contends that while panpsychism suggests "enduring

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<sup>33</sup> William Seager, "Panpsychist Infusion," in *Panpsychism: Contemporary Perspectives*, ed. Godehard Brüntrup and Ludwig Jaskolla (New York: Oxford University Press, 2017), 241-246.

<sup>34</sup> David Griffin, "Consciousness as Subjective Form," in *Process Approaches to Consciousness in Psychology, Neuroscience, and Philosophy of Mind*, ed. Michel Weber and Anderson Weekes (Albany: State University of New York Press, 2009), 184.

<sup>35</sup> Griffin, "Consciousness as Subjective Form," 196, fn6.

individuals” as the ultimate world units, panexperientialism suggests momentary experience—the foundational premise of process philosophy—as the basic unit of an unfolding reality.<sup>36</sup>

Griffin also claims that “Whitehead’s doctrine should not be called simply ‘panexperientialism,’ but ‘panexperientialism with organizational duality’.” This notion of organizational duality allows Whitehead’s panexperientialistic philosophy wiggle room to hold that all actualities have experience, but that there are types/degrees of experiencing at play. Charles Hartshorne in explication of this idea refers to “simple and compound individuals,” e.g., quarks or simpler units compounded into atoms, molecules, cells, animals, humans versus “mere aggregations of individuals,” such as rocks and telephones.<sup>37</sup> Griffin includes Hartshorne’s thesis to overcome skeptics’ misinterpretation of Whitehead’s metaphysics by ascribing conscious experiencing to rocks and telephones, and labeling it, consequently, absurd.

Whitehead’s process philosophy overcomes the hard problem of consciousness by shifting the paradigmatic genesis from subjective perspective to conscious/unconscious feeling and embodied experiencing (i.e., ingression)—into an ever-unfolding concrescence of becoming, of which he writes, “the many become one, and are increased by one”<sup>38</sup>. Each concrescence, or unfolding experience, is di-polar in nature, and includes both a physical and mental pole that are integrated in feeling communication with one another.

His philosophy also stands apart from the various problems and issues associated with materialism/physicalism, dualism, and constitutive panpsychism. For example, according to his organic philosophy:

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<sup>36</sup> Griffin, “Consciousness as Subjective Form,” 185.

<sup>37</sup> Griffin, “Consciousness as Subjective Form,” 184.

<sup>38</sup> Whitehead, *Process and Reality*, 21.

- There is no explanatory gap (as with materialists/physicalists), as each concrescence has both public and private components, and does not begin with a “subject” experiencing in the first person, nor a “third person” scientist watching. Whitehead’s is a participatory approach, and the “subject” only arises (in a personally held moment within the mental pole) as it is called forth in the unfolding occasion. As Whitehead reminds through his *reformed subjectivist principle*, “that apart from the experiences of subjects there is nothing, nothing, nothing, bare nothingness.”<sup>39</sup>
- There is no epiphenomenalism nor is there any kind of subjective over-determination (as with dualists). There is also no mental causation problem. Both the physical and mental feeling poles in Whitehead’s process ontology play a substantial and interconnected role (the extent to which is determined by the grade of occasion) in each unfolding occasion of experience.
- There is no combination nor de-combination problem of feeling or consciousness (as with constitutive panpsychists). Process philosophy embraces the organic evolution of life. It is scalable and provides a description of everything from the smallest subatomic particles to a star falling in the cosmos. Further, Whitehead’s is a panexperientialistic metaphysics wherein consciousness is a rare end-stage part of an unfolding occasion of experience. Even so, it does seem to hold a proto-consciousness notion all the way down evolutionarily.

Non-human consciousness (consciousness as Whitehead defines it) has been discovered through research studies that occurred after Whitehead’s lifetime. For example, it has become known that great apes, grey parrots, and dolphins can be trained to react to gestures or symbols, and to reason things out and correctly answer questions.<sup>40</sup> The pivotal discovery of the waggle dances of bees as a means of sharing information and making recommendations to their hives also suggest Whiteheadian consciousness. These dances are used to communicate things such as

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<sup>39</sup> Whitehead, *Process and Reality*, 167.

<sup>40</sup> Donald Redfield Griffin, “Windows on Nonhuman Minds,” in *Process Approaches to Consciousness in Psychology, Neuroscience, and Philosophy of Mind*, ed. Michel Weber and Anderson Weekes (Albany: State University of New York Press, 2009), 225-226.

the location of pollen troves, or the “distance, direction, and desirability” of potential new homes for the hive. One bee can also be convinced of his fellow bee’s outlook, and consequently joins the first in his solitary dance to show agreement and support.<sup>41</sup>

David Griffin’s essay, “Consciousness as Subjective Form,” provides additional substantiation for Whitehead’s philosophy of organism as the leading theoretical approach for describing reality and the inherent role of consciousness. He explores Whitehead’s own desire for “common sense philosophy,” a philosophy that delivers both theoretically and practically, as the criterial gold standard. Whitehead’s sought-after “hard core” sense of common sense<sup>42</sup> includes four “overpowering” notions: “[1] that conscious experience exists, [2] that it exerts influence upon the body, [3] that it has a degree of self-determining freedom, and [4] that it can act in accord with various norms.”<sup>43</sup> After a brief analysis and discussion, Griffin concludes that all four are inevitable presuppositions that any theory of consciousness must explain in order to be considered even remotely adequate. Dualism and materialism fail to stack up across all, as Figure 3. details.

Whitehead’s philosophy, by contrast, meaningfully explains and accounts for each of these notions of conscious experience. The first two—that conscious experience exists and that it exerts influence upon the body—are carefully considered in Whitehead’s cosmology. Griffin begins by expounding the doctrine’s core and underlying principal: “The whole point of panexperientialism is that creative experience is the aboriginal stuff out of which human

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<sup>41</sup> Griffin, “Windows on Nonhuman Minds,” 226-228.

<sup>42</sup> Note: Referred to as “hard core” because it includes notions that are automatically presupposed even if theoretically denied.

<sup>43</sup> Griffin, “Consciousness as Subjective Form,” 177.

experience and what we call material objects are both made.”<sup>44</sup> Yet, even though all experience is sentient and feeling in nature, not all creative experiencing is explicitly conscious.

Consciousness, according to Whitehead, is a rarity that occurs in the later phase of only *some* unfolding occasions of experience, specifically those with a subjective form that is reflective in nature and involves an “affirmation-negation contrast,” i.e., an awareness of something definite alongside additional potentialities wherein there is reflection upon “what it is and might not be, or what it is not and might be.”<sup>45</sup> Whitehead describes this “flickering” and “intense” contrast in which “there is a small focal region of clear illumination, and a large penumbral region of experience” as the crown, not the base, of experience.<sup>46</sup>

The phasic nature of Whitehead’s ontology, with its physical and mental poles, as well as proto-consciousness extending down to the neuron or cellular level, explains the first two conscious experiencing notions. Conscious experiencing is part and parcel of the world of unfolding occasions simply expressed in higher order, more complex enduring living societies of occasions. Thus, there is no top-down/bottom-up transmission issue, nor any causal connection that needs linkage. Further, given the phasic physical and mental poles of each unfolding occasion, there is an inherent undulation between mind and body as two phases of one concrescence.

Whitehead’s entire metaphysics encompasses the notion of self-determining freedom as part of experiencing. The unfolding of each occasion of experience, no matter how primal, has an “about-ness” to it which lures it toward one thing (e.g., sucrose) and away from something else

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<sup>44</sup> Griffin, “Consciousness as Subjective Form,” 187.

<sup>45</sup> Whitehead, *Process and Reality*, 243.

<sup>46</sup> Whitehead, *Process and Reality*, 267.

Common Sense Notions About Consciousness	Materialists	Dualists	Panexperientialism (Process Philosophy)
<b>#1.</b> Consciousness and conscious experience exist	Assume naturalist, organic view Consciousness must emerge from somewhere		Sees creative experiencing as the “aboriginal stuff” out of which everything is continuously becoming.
	A new possibility of matter? (Strawson)	Mind emerges how/from where? (Descartes— <i>ex nihilo</i> via God doesn’t cut it)	Consciousness happens as a later phase of an unfolding experience among “higher order” experiences. It is an experiencing of a rare and intense “affirmation-negation” feeling contrast—the “crown” of experience.
<b>#2.</b> Consciousness exerts influence on the body	Hit a wall! Physical matter explained by laws of physics and chemistry. There is no higher law over these.	Can’t explain connection between mind & body—different ilk  Epiphenomenalists admit to mind but think it only the whistle on the train.	The organic nature of unfolding experience is lead by an ingression of physical data that entertains & experiences physical and conceptual feelings. These feelings are phasic, not separate. Mind and body are two phases of one form.
<b>#3.</b> Consciousness has a degree of self-determining freedom	In a world limited to subatomic particles & their relations with one another, free-will is at best an illusory feeling  (Even quantum mechanics’ probabilities don’t lead them to assume free-will)	The brain and mind exist, but lack understanding of how a non-physical mind might exert influence upon the neurons of the brain.	Emphasizes the notion of self-determining freedom as integral to all experience No matter how primal there is a feeling of “about-ness” of intention. Higher order occasions enjoying consciousness have deterministic agency.
<b>#4.</b> Consciousness acts in accordance with various norms (cognitive, moral, aesthetic)	The body perceives only through its physical senses. Thus, the abstract nature of norms can’t be perceived much less exert any causal influence.	Unable to explain or understand how a nonphysical mind (where norms would originate and be held) could connect with/have impact on the brain or physical body.	Norms are transmitted into unfolding experience through the non-sensory perception of causal efficacy—a mode of perception that is most primal and primary in experiencing. This mode simultaneously embraces the past and portends the future.

Figure 3.

(e.g., toxins). The most primitive occasions quickly (although still freely) conform to their existing society or nexus configurations, with limited engagement of the mental or subjective phase of the concrescence process. This could include occasions of simple individuals, such as quarks or simpler units, that Hawthorne delineates, or occasions of very primal compound individuals, such as the undulating bacterial spirochetes that William Irwin Thompson describes in *Coming Into Being*.<sup>47</sup>

By contrast, higher order occasions elicit higher engagement with the subjective form, a private space of deterministic agency, that includes the lure of the subjective aim and the

<sup>47</sup> William Irwin Thompson, *Coming Into Being: Artifacts and Texts in the Evolution of Consciousness* (New York: St. Martin’s Press, 1996), 19-22.

ingression of eternal objects. These occasions straddle both past and future through an almost immediate ingression of their past coupled with the possibilities of the future—a physical ingression of perception through the mode of causal efficacy. Each unfolding occasion is created completely anew, and thus, exercises “at least some slight iota of self-determination.”<sup>48</sup>

The final notion, that our actions involve acting in accord with norms, also conforms with Whitehead’s process philosophy doctrine. It starts with the idea of “ingression” as a form of perception more basic than sensory perception. Griffin notes that “it is through this non-sensory prehension that we apprehend norms.”<sup>49</sup> This is perhaps one of the most complicated facets of Whitehead’s ontology that involves modes of perception.

The most primal and “primary in experience”<sup>50</sup> is perception in the mode of causal efficacy. This is the way in which norms are transmitted into experience. Yet, the crux of the issue, as Griffin explains it, is that in our conscious experience “the data of perception in the mode of causal efficacy tend to drop out so that sensory perception gets virtually equated with perception in the mode of presentational immediacy.”<sup>51</sup> Thus, even though these moral, aesthetic, and cognitive norms exist, we do not perceive them directly with our sensory perception. This is why Whitehead’s philosophy includes God, as a creature of creativity, who is in the thick of experience with us, but who also through his primordial nature lures us in each unfolding occasion of experience toward joy, and ideals and aesthetic choice possibilities.

### **AI’s Potential Wonder/Potential Demise: What Is/What Might Be?**

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<sup>48</sup> Griffin, “Consciousness as Subjective Form,” 188.

<sup>49</sup> Griffin, “Consciousness as Subjective Form,” 190.

<sup>50</sup> Griffin, “Consciousness as Subjective Form,” 195.

<sup>51</sup> Griffin, “Consciousness as Subjective Form,” 193-194.

This has been a lengthy exposition of ideas presented to paint a backdrop against which the specter of AI—cultural flourishing, human demise, or something in-between—can be considered.

As mentioned earlier, artificial intelligence (AI) is a cutting-edge technology that is central to the burgeoning field of cognitive science. It is defined by the Association for the Advancement of AI as “the scientific understanding of the mechanism underlying thought and intelligent behavior and their embodiment in machines.”<sup>52</sup> The term was first coined at Dartmouth College in 1956 as part of a summer research project offered to explore “how machines could be programmed to perform ‘every aspect of learning or any other feature of intelligence.’”<sup>53</sup> From this humble beginning, it is now active in myriad forms in contemporary life. Its presence is felt from web search engines and the recommendations made by YouTube and Netflix, to interacting voice-recognition systems such as Siri and Alexa, self-driving cars, ChatBot service representatives, and creative tools such as ChatGPT and Dall E. As its name suggests, AI is based on the idea of the computer as a metaphor (or potential replicant) of the human brain. Its development has been fast and deep.

Having first mastered foundational *machine learning* (i.e., algorithms designed so that computers self-improve their performance with each iterative process), AI is now capable of *deep learning*. Deep learning entails *back-propagation* (i.e., multilayered neural networks self-enhancement via interaction with data) and *convolution* (i.e., pooling and extrapolating “complex

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<sup>52</sup> Eric Horvitz and Tom M. Mitchell, “Scientific Progress in Artificial Intelligence: History, Status, and Futures,” in *Realizing the Promise and Minimizing the Perils of A.I. for Science and the Scientific Community*, ed. Kathleen Hall Jamieson, Anne-Marie Mazza, and William Kearney (Philadelphia: University of Pennsylvania Press, 2024), 147.

<sup>53</sup> Horvitz and Mitchell, “Scientific Progress,” 148.



signals” into higher order abstractions). A substantial advancement has been in the context of these deep neural networks (DNNs) employing self-supervised learning. These developments enable systems to scan the web or very large datasets for purposes of data/information capture wherein they tune their own algorithms.<sup>54</sup> The latest developmental inflection is *Generative AI*, exemplified by applications such as OpenAI’s ChatGPT:

Generative AI spans methods that generate natural language, portions of computer programs, imagery, combinations of imagery and language, and other types of output, such as sequence of amino acids in response to inputs about desired structure and function.<sup>55</sup>

Eric Horvitz, Chief Scientific Officer at Microsoft, and Tom Mitchell, founder of the Machine Learning Department at Carnegie Mellon University, are upbeat in their commendation of the latest wave of generative AI models. They caveat only lightly the need to explore the potential failings of these systems:

The original set of ChatGPT systems...have surprised the world with their generalist powers to perform abstraction, generalization, and numerous forms of composition. The models also show broad “polymathic” capabilities, demonstrating the ability to weave together concepts and content drawn from multiple disciplines. The scientific community does not yet have a good understanding of the emergence of their abilities to perform various kinds of summarization, text generation, problem-solving, code program generation, and conversational dialogue. Multiple projects are underway to probe the powers and failings of these models.<sup>56</sup>

Generative AI’s ability to “abstract, generalize, and compose” along with its mechanistic and calculative nature make it, by definition, highly susceptible to Blind Spot metaphysics. Considered as an entity, AI’s *matter* is datasets; its *mind/psyche* is mathematical algorithms. Thus, at its most basic level AI has the potential to be rife with the reification of structural

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<sup>54</sup> Horvitz and Mitchell, “Scientific Progress,” 151-155.

<sup>55</sup> Horvitz and Mitchell, “Scientific Progress,” 158.

<sup>56</sup> Horvitz and Mitchell, “Scientific Progress,” 162.

invariants of experience, surreptitious substitutions, fallacies of misplaced concreteness, and amnesia of experience. The result of these fallacies could be as innocuous as my friend believing a 30 minute walk takes only 10 minutes, or the journalist, who let AI make all her life decisions, began to feel averaged out, like the color taupe.<sup>57</sup> But such fallacies can also prove more dangerous, such as the faked legal precedence cases AI included in a recent lawyer’s legal brief<sup>58</sup>, or ill-conceived health advice given by Google’s Gemini that people mistake as gospel, or the crashing of a self-driving Tesla, or homeland security erroneously profiling you as a terrorist. In future, the potential guidance/error of AI in its “expert” mode will become even more pervasive:

...recent studies have demonstrated that generalist foundation models can be guided through special prompting strategies to perform as top specialists... Innovation with prompting shows that generalist models can be steered to perform as experts on competency exams in other areas [in addition to medicine], including electrical engineering, machine learning, philosophy, accounting, nursing, and psychology.<sup>59</sup>

And despite its transformative “deep learning” and claimed “polymathic” capabilities, AI is limited by the very datasets that are its food for analytic thought. These can now be quite vast including everything from large sweeps of internet texts and visual imagery, behavioral and implied attitudinal data captured by zip codes, barcodes, QR codes, “cookies,” credit card transactions, facial recognition, and screens activated by eyeballs, to specific datasets of research files (e.g., medical records, scientific experiments). Yet, these datasets are not infinite in scope,

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<sup>57</sup> Kashmir Hill, “I Took a ‘Decision Holiday’ and Put AI in Charge of My Life,” *New York Times*, November 1, 2024, <https://www.nytimes.com/interactive/2024/11/01/technology/generative-AI-decisions-experiment.html?searchResultPosition=12>.

<sup>58</sup> Benjamin Weiser and Nate Schweber, “The ChatGPT Lawyer Explains Himself,” *New York Times*, June 8, 2023, <https://www.nytimes.com/2023/06/08/nyregion/lawyer-chatgpt-sanctions.html>.

<sup>59</sup> Horvitz and Mitchell, “Scientific Progress,” 165.

even though quite large, but are captured within a finite frame. It is inside this frame that all “intelligence” takes place.

Frank et al. in *The Blind Spot* view this “frame problem” and corresponding relevance issue as a crucial AI shortfall in light of its ability to model the real world:

In real-world situations, there is no way to specify in advance what can happen and what may turn out to be relevant. There is no way to put boundaries on everyday situations to specify what falls inside them and what falls outside.<sup>60</sup>

The authors go further to note two major implications complicit within the frame problem. The first is the proclivity to adapt or limit our world so that AI can work within it.<sup>61</sup> Thus, we as programmers become the programmed. For example, in the early days of Facebook you chose your friends; now it tells you who your friends might be and infers that more are better. Or you can think of your elders who struggle with online payment systems in our increasingly cashless society.

The second is that given AI’s extraction of input from existing sources, the fodder that it is working with will include the human judgments, historical norms, stereotypes, and biases of those that created it.<sup>62</sup> Thus, one could conclude that AI as now configured is not necessarily creative, expansive, and “helpful to humanity,” but instead promotes humanity turning back on itself, and doubling down on both its successes and failures. It is like being caught in an endless loop of increasing insularity and smallness codified by a cyber-authority.

In Whitehead’s organic philosophy, life in all its occurrences and permutations is not a determinate repetition of static instances, but an ongoing morphing that both endures and

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<sup>60</sup> Frank, Gleiser, and Thompson, *The Blind Spot*, 173.

<sup>61</sup> Frank, Gleiser, and Thompson, *The Blind Spot*, 174.

<sup>62</sup> Frank, Gleiser, and Thompson, *The Blind Spot*, 176.

constantly changes. AI developers might reassure that deep learning facilitates such ongoing creativity. Yet when the entire process of concrescence—the phasic unfolding of each occasion of experience—is considered, it becomes obvious that AI leaves things out. It primarily omits the feelings of experience, the heightened emotional intensity of consciousness, and the wonder of creativity itself. This heightened intensity is not exclusively about decision making (AI’s forte) nor about getting something right. Rather it is a lure that activates the creative process itself so that *that which is* might actually morph into *that which might be*. The feeling of that contrast is what effects its satisfaction-enjoyment outcome. The subject-superject or actualized occasion then itself becomes publicly available to the next unfolding concrescence. The process of concrescence is not frame bound; it is “an individualization of the whole universe”<sup>63</sup>.

One facet of concrescence that lays bare AI’s omission of that which deeply influences the spirit and nature of creativity, and deepens life’s overall meaning and enjoyment, is found in Whitehead’s two modes of perception. These comprise the modes of causal efficacy and presentational immediacy. The interplay between these two modes is referred to as symbolic reference, or as the one subjective feeling that is their cumulative effect.<sup>64</sup> For higher grade occasions, such as those making up enduring humans, the human body is the locus of origin for these modes of perception. (Figure 4.)

As noted earlier, causal efficacy is the most primal mode of perception and is more basic than sensory perception. It is why we automatically blink when the lights are suddenly turned on in a darkened room. Or it can be found in epigenetics where trauma is passed genetically from

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<sup>63</sup> Whitehead, *Process and Reality*, 165.

<sup>64</sup> Whitehead, *Process and Reality*, 121-122.

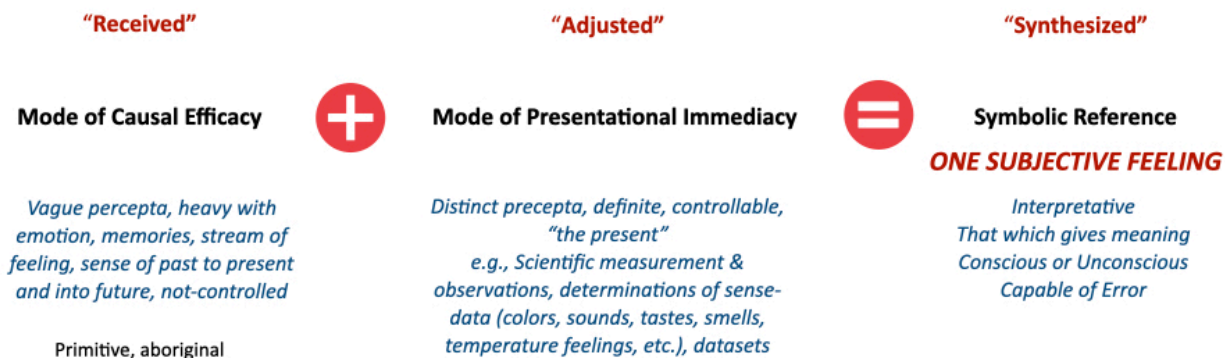


Figure 4.

one generation to the next. Causal efficacy is also exemplified by the visualizations we receive when we hear the word “forest” and are taken back to memories of past hikes and the pine tree scents that infused the air. It is memory-based, something real that happened in the past; not fantasy-based imagination or something made up. According to Whitehead, causal efficacy:

...produces percepta which are vague, not to be controlled, heavy with emotion: it produces the sense of derivation from an immediate past, and of passage to an immediate future; a sense of emotional feeling, belonging to oneself in the past, passing into oneself in the present, and passing from oneself in the present towards oneself in the future... This is our general sense of existence, as one item among others, in an efficacious actual world.<sup>65</sup>

Scientific method does everything in its power to separate out causal efficacy from its experiments because it is a form of subjectivity which supplies meaning and interpretation to symbolic reference. The laboratory is only there to discern the mechanical *how and what* of things, not the *why*.

By contrast, prehensions in the mode of presentational immediacy are more distinct and controllable and have little reference to the past or future, or to emotion. This mode of perception is that upon which scientific analysis is focused. Whitehead compares the two:

<sup>65</sup> Whitehead, *Process and Reality*, 178.

Consciousness only dimly illuminates the prehensions in the mode of causal efficacy because these prehensions are primitive elements in our experience...[by contrast] prehensions in the mode of presentational immediacy...are late derivatives... [they] are among those prehensions which we enjoy with the most vivid consciousness.<sup>66</sup>

AI itself falls into a two-fold issue around causal efficacy. As already discussed, AI fails to recognize the norms, stereotypes, and biases inherent in the data that is its initial input. At the same time, it omits in its iterative modeling the experiential, feeling, and memory-infused nature that is the fullness of life itself. This experiencing includes the ingression of causal efficacy, the emotional intensity of the consciousness contrasts, the relational nature of mind and body (or phasic unfolding of physical and mental poles), as well as the integral nature of humans within an environmental continuum where all is connected across all degrees of scale.

Tara Lumpkin and Roger Walsh, in two different but inter-related articles, bring up additional facets of consciousness contributing to the richness of life that reside completely outside AI's algorithmic logic, no matter how deep the learning of its neural networks. In Lumpkin's article, "Perceptual Diversity: Is Polyphasic Consciousness Necessary of Global Survival?," she references that ninety percent of cultures have historically employed altered states of consciousness, such as those experienced through meditation, trance, and dreams, to enhance knowledge, learning, and cohesion.<sup>67</sup> Given this high degree of prevalence of what she terms, *polyphasic consciousness*, she finds it both a "normal" and important part of life.

Roger Walsh, in his article "Can Western Philosophers Understand Asian Philosophies?," expands this notion further through examples of Asian philosophies, such as Yoga, Vedanta,

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<sup>66</sup> Whitehead, *Process and Reality*, 162.

<sup>67</sup> Tara W. Lumpkin, "Perceptual Diversity: Is Polyphasic Consciousness Necessary for Global Survival?" *Anthropology of Consciousness* 12, no. 1 (March/June 2001): 37.

Buddhism, and Taoism. In such Asian traditions, he contends there exists “state-specific” knowledge and insights that can only be obtained by those trained to achieve such specialized states.<sup>68</sup> From a Whiteheadian perspective, these special types of consciousness might be thought of as experiential attempts to bring causal efficacy from the background to the foreground of awareness.<sup>69</sup> Or they might be considered a means to open, in the mental phase of concrescence, access to a vaster array of eternal objects for both positive and negative ingression.

AI developers might contend that AI is not intended to contribute to the fullness of life, including a need to extend beyond its monophasic orientation or the more *farfetched* notion of altered state-specific learning. AI’s only intention is to help humanity in its logic-oriented waking state. Thus, there is no problem. But given the prominent role AI is already starting to play across industries as well as across society in general, things do seem to be moving in a direction where it is important to assess how AI adds to or subtracts from the richness of life.

In addition, huge amounts of capital are being spent and are needed for AI’s continued development. As a result, corporations and wealthy individuals are funding it; not government and universities.<sup>70</sup> Such huge amounts of spending coupled with energy consumption projected to be more than it takes to power some cities or even the entirety of the U.S. and eating up huge swaths of land for its processing centers<sup>71</sup>, makes one question the drive behind the AI pursuit.

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<sup>68</sup> Roger Walsh, “Can Western Philosophers Understand Asian Philosophies?,” *CrossCurrents*, Fall 1989, 39, no. 3, (Fall 1989): 288, <https://www.jstor.org/stable/24459176>.

<sup>69</sup> Anderson Weekes, “Whitehead’s Unique Approach to the Topic of Consciousness,” in *Process Approaches to Consciousness in Psychology, Neuroscience, and Philosophy of Mind*, ed. Michel Weber and Anderson Weekes (Albany: State University of New York Press, 2009), 147-148.

<sup>70</sup> Horvitz and Mitchell, “Scientific Progress,”

<sup>71</sup> Spencer Kimball, “Data centers powering artificial intelligence could use more electricity than entire cities,” *CNBC*, November 23, 2024, [https://www.cnn.com/2024/11/23/data-centers-powering-ai-could-use-more-electricity-than-entire-cities.html?\\_\\_source=iosappshare|com.apple.UIKit.activity.Mail](https://www.cnn.com/2024/11/23/data-centers-powering-ai-could-use-more-electricity-than-entire-cities.html?__source=iosappshare|com.apple.UIKit.activity.Mail).

Unlike the 16th century drive for knowledge and clarity of truth that propelled the scientific revolution, the AI turn seems, on judgment, related more to capitalistic gain and an often exhibited anthropocentric need to power-over.

Second, through AI's generative processes with objective data, it is contributing unwittingly to new layers of meaning that promulgate new types of symbolic reference. For example, describing ChatGPT as a “polymath” or “expert” begins to shift the very meaning of those words and the nature and characteristics of who or what qualifies for such designation. It also risks shifting the true nature of creativity and the creative process, as well as the authorship of ideas, the notion of trust, and of truth itself.

### **Red Flags and Guard Rails**

“...to navigate by a landmark tied to your ship's head is ultimately impossible.”<sup>72</sup>

To address the opening question of whether the promise of AI is one of cultural flourishing or human demise, this paper will conclude with an examination of potential AI red flags that appear through the gaze of the Blind Spot and Whitehead's organic philosophy. Three areas will be explored along with guard rail considerations to mitigate their potentially “demise-like” impact. These areas are: 1) AI's overall intent, 2) AI naming and descriptors, and 3) AI in light of creativity and experiencing.

In consideration of this paper's much-discussed philosophical gaze, AI's overall intent of being for the “good of humanity” is a bifurcation of nature and a surreptitious substitution. The

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<sup>72</sup> Donald M. MacKay, “Machines and Societies,” in *Man and His Future*, ed. Gordon Wolstenholme (Boston: Little, Brown and Company, 1963), 286.



rationale discussion points are detailed in Figure 5. which are self-explanatory. Potential guard

<b>I. AI Overall Intent</b>	
<b>Blind Spot/Process Philosophy Red Flags</b>	<b>Discussion</b>
<b>For the “good of humanity” is a bifurcation of nature and surreptitious substitution</b>	<ul style="list-style-type: none"> <li>• Enduring humans are a small &amp; rare part of a creating universe. AI’s stated intention bifurcates and leaves out everything else (not human) that is also feeling &amp; experiencing.</li> <li>• Stated AI intention is a “frame issue” misrepresentation in that it asserts a large frame (humans) but actually works within very specific/limited datasets that are not even cross-disciplinary.</li> <li>• AI ignores cosmic whole wherein everything is related to everything.</li> <li>• AI ignores polar facet of “good” which is the dark or shadow side of humanity. Technology itself has become an ethical, economic, and literal battlefield.</li> </ul>

Figure 5.

rail considerations to offset these “intention” issues of AI are to:

- Facilitate AI development in specific areas that have intended implications for the good of all, i.e., geosphere, biosphere, hydrosphere, atmosphere, stratosphere, etc.
- Apply a bottom-up versus top-down AI developmental approach. In other words, find areas that truly could merit from AI technology and implement against these versus developing capabilities of AI and then seeing where they fit.
- Acknowledge seriously the need to protect against AI misapplication and dark/shadow uses, including the prediction of insidious, unforeseen consequences.
- Ensure significant academic funding of AI to balance corporate-side development.
- Make crucial distinction amongst AI’s intentions of cultivation, civilization, and capitalism. In other words, make sure to assess AI’s impact in terms of truly promoting aesthetic cultivation vis a vis an extension of human civilization across the world and other planets, and vis a vis non-altruistic drives for wealth and power.
- Assess “utility” versus AI abuse and addiction of which humans are prone. In other words, make it a priority to track mental/emotional/physical health metrics that might correlate with advanced AI development, e.g., daily screen-times, depression rates, acts of violence against self or others, etc.

A host of red flags appear when naming and descriptive protocols of AI are brought under consideration through the Blind Spot and Whiteheadian gaze. First, using the term “intelligence” represents the fallacy of misplaced concreteness; next, AI does not and cannot have consciousness; and, as previously discussed, the adjectives used to describe AI and the ways it is

presented lead to the manipulation of symbolic reference. Again, discussion points for each red

<b>2. Naming/Descriptors</b>	
<b>Blind Spot/Process Philosophy Red Flags</b>	<b>Discussion</b>
<b>AI “intelligence” name is a fallacy of misplaced concretion</b>	<ul style="list-style-type: none"> <li>• Substituting a mathematical/algorithmic abstraction for a word that has greater definitional depth than purely an ability to calculate. Intelligence is more than information and its aggregation and manipulation.</li> <li>• AI has a relevancy deficiency and cannot reach across “frames” to make relevant association, an important facet of intelligence.</li> <li>• The word “artificial” with “intelligence” doesn’t bound it appropriately — because inclusion of “artificial” it still implies an ability to enact/replicate all manners of intelligence...social, emotional, relational, etc.</li> <li>• AI risks becoming a misplaced surrogate for human intelligence.</li> </ul>
<b>From a process philosophy perspective, AI <u>does not/cannot</u> have consciousness</b>	<ul style="list-style-type: none"> <li>• AI uses algorithms to choose between dichotomous inputs with a high degree of sophistication.</li> <li>• AI does not capture intensified “feeling” that makes consciousness the “crown” of experience.</li> <li>• Embodiment is at the heart of philosophy of organism; AI is abstracted programming. It is not an entity, it is not embodied, it cannot feel.</li> <li>• AI does not experience; it does not have felt-sense awareness of its own thinking.</li> </ul>
<b>Adjectival descriptors and naming lead to manipulation of symbolic reference</b>	<ul style="list-style-type: none"> <li>• AI descriptors contribute to new layers of meaning that promulgate new types of symbolic reference, e.g., what it means to be a polymath, genius, expert.</li> <li>• Such descriptor use breaks down traditional, antecedent causal efficacy associations.</li> <li>• Symbolic reference as an interpretive element of experience is open to error. Thus, the notion of “truth” becomes unstable—which is a part of life, but which becomes particularly onerous in light of AI given its oft “expert” designation.</li> </ul>

Figure 6.

flag are listed in Figure 6. Potential guard rail considerations for these issues are to:

- Pursue accuracy when explaining what AI truly does, as well as providing caveats and warning statements.
- Clarify what AI descriptions leave out.
- Avoid misleading descriptors of AI, such as “polymath,” “expert,” “genius.”
- Avoid unduly amplifying potentially misleading descriptions of AI’s benefits, roles, and “essence” (i.e., through advertising, marketing, PR) to drive revenue that covers R&D costs that are significant.
- Extend ROI parameters beyond capital gains and include targeted measurable improvements of planetary good, e.g., atmospheric cooling, reduction in wars and war fatalities, decreased extinctions, etc.
- Strongly consider not-for-profit/philanthropic only stance of AI development.

Finally, AI’s self-proclaimed generativity and thus, implied creativity, and human-like potentiality are huge misnomers. It is good to recall Whitehead’s sage advice that, “As we think,

we live. This is why the assemblage of philosophic ideas is more than a specialist study. It moulds our type of civilization”<sup>73</sup>. In light of influencing humans’ modes of thought and world views about what is truly creative and what is truly human, these red flags are substantial. Identified risks here are twofold: 1) AI as generative does not necessarily propagate creativity, but potentially takes from it, and 2) Humanoid representation of AI invokes risks of amnesia of experience, the reification of structural invariants of experience, and surreptitious substitutions.

<b>3. Creativity &amp; Experiencing</b>	
<b>Blind Spot/Process Philosophy Red Flags</b>	<b>Discussion</b>
<p><b>AI as generative does not propagate creativity but potentially takes from it</b></p>	<ul style="list-style-type: none"> <li>• Raises question, can something be both “generative” and “artificial”? Violates organic creative nature of the cosmos as per process philosophy.</li> <li>• The term “generative” is defined as generating, originating, producing or reproducing (Miriam Webster Dictionary) implies generative AI is capable of creativity.</li> <li>• Creativity as first principle of process philosophy is an organic process, it cannot be replicated mechanistically.</li> <li>• Generative AI implies it is doing something new, yet it is extractive and parasitic as it is fueled by the creativity of others, e.g., its programmers, the creators of all its “data input.”</li> <li>• AI could potentially be employed to “spur” creativity; yet jury is still out.</li> </ul>
<p><b>Humanoid representation of AI invokes risks of amnesia of experience, reification of structural invariants of experience, and surreptitious substitution.</b></p>	<ul style="list-style-type: none"> <li>• Life is not mechanistic but a feeling/experiential unfolding</li> <li>• Misrepresenting AI as humanoid in nature through “names” (Alexa, Siri), programmed emotion &amp; empathetic response has the potential to further isolate humans from interaction with organic beings, i.e., other humans, plants, animals, etc.</li> <li>• Such anthropomorphic depictions blur the organic and mechanistic, surreptitiously substituting mechanistic for organic.</li> <li>• Droids are in essence a reification of a structural invariant of experience.</li> <li>• Contributes to deep forms of abstractionism, e.g., substituting droids/drones for humans, artificially removes one from the on-the-ground reality of humans and nature.</li> </ul>

Figure 7.

The discussion points in Figure 7. detail the specific concerns surrounding both issues. Potential guard rail considerations are to:

- Organize and present AI as a resource or tool that frees up time for cultural flourishing, such as creativity and imagination through music, art, poetry, etc. Depict and design it as a catalyst for creativity, not as the end-result of something created.

<sup>73</sup> Alfred North Whitehead, *Modes of Thought* (New York: The Macmillan Company, 1938), 63.

- Credit and remunerate AI’s creative sources that are used as inputs for its calculations, development, and output. Acknowledge its extractive and iterative nature.
- Ask permission to use primary, first sources.
- Guard, name, and honor authentic first sources.
- Make a delineation between creativity which is organic and state-based infused, and whatever-one-might-call that which is purely extractive and mechanistic through AI.
- Avoid designing AI—when treated as a separate robotic entity—to look, behave, and sound like humans or other organic beings. AI’s mechanistic nature needs to be identifiable in some form or fashion.
- Use AI to support humanitarian efforts that help people maintain and enhance their emotional, aesthetic, and embodied experiences with other organic beings. There seems a strong need to overcome the isolationism of modernity, which AI could worsen or could help to overcome.

Despite the numerous red flags that AI development raises, it clearly includes facets that offer the possibility of cultural flourishing. For example, screen times around the globe are increasing each year. As of January 2022, internet users worldwide, between 16 and 64 years of age, spent nearly seven hours per day on the internet, more than one-third of which was spent on social media.<sup>74</sup> AI might help reduce people’s workloads to reduce screen times, which are detrimental to physical and emotional health.<sup>75</sup> Idealistically, work-week hours could decrease so that people could devote themselves to physical activity, more personally satisfying undertakings, and helpful community endeavors. Its guidance, especially in the medical field, might prove particularly helpful in areas of the world where doctors are limited in number, so that more people could be diagnosed and treated. Further, it might help expedite scientific research around climate change, species under threat of extinction, as well as a host of other

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<sup>74</sup> Simon Kemp, “Digital 2022: Global Overview,” *Datareportal*, January 26, 2022, <https://datareportal.com/reports/digital-2022-global-overview-report>.

<sup>75</sup> Mary Grace Descourouez, “What Excessive Screen Time Does to the Adult Brain,” *Stanford University Lifestyle Medicine*, May 30, 2024, <https://longevity.stanford.edu/lifestyle/2024/05/30/what-excessive-screen-time-does-to-the-adult-brain/>.

environmentally oriented issues. The list is long of how AI might be used as a tool for planetary betterment, just as the length of its shadow could contribute to planetary and human demise.

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