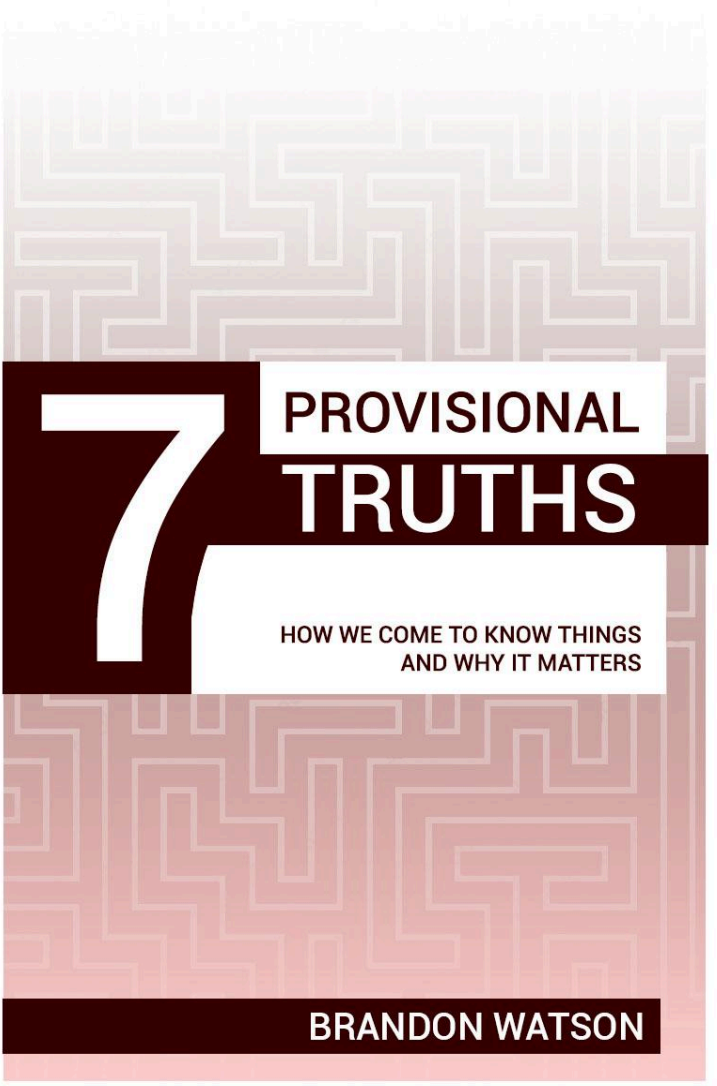
7
PROVISIONAL
TRUTHS
HOW WE COME TO KNOW THINGS
AND WHY IT MATTERS
BRANDON WATSON

7 PROVISIONAL TRUTHS

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THE 7 (PROVISIONAL) TRUTHS

1.) MINDS DISCLOSE WORLDS

2.) KNOWLEDGE IS MOSTLY SITUATED COPING

3.) CATEGORIES ARE ALWAYS CONTEXTUAL

4.) ALL PERSPECTIVES ARE PARTIAL

5.) INTELLECT SERVES INTUITION

6.) MOTIVATED REASONING IS THE NORM

7.) BELIEFS SERVE US BEST WHEN HELD LIGHTLY

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I would like to express my deep gratitude to the individuals whose ideas, insights, and contributions have greatly influenced the development of this book. While I have included a list of some of their works in the 'Additional Reading' section, I would like to highlight a few individuals in particular - Francisco Varela, Evan Thompson, and Eleanor Rosche - without whom this book wouldn't exist. Additionally, the insights of Ken Wilber, Hubert Dreyfus, and John Vervaeke were instrumental to the ideas contained within.

It has often been said that all intellectual contributions are made atop the shoulders of giants; a notion keenly felt throughout the creation of this book. So, from the bottom of my heart, thank you for the knowledge that you've contributed about ourselves and our world.

- Brandon Watson -

INTRODUCTION

A Little Bit of Philosophy Can Be a Dangerous Thing

In this book we'll be taking a 'guided tour' of how minds acquire valid knowledge about Reality. The basic insight that will guide us on our journey is the importance of the living body to what minds are and how thought works. And the underlying intuition which we'll be exploring is that a more sophisticated understanding of what knowledge is can help us relate to our beliefs about Reality in healthier ways.

So if that's what we're aiming at, let's take a brief moment to lay out what this book is *not*. What this book *won't* do, dear reader, is try to convince you that you should learn to *think like a philosopher*. If it were my goal to add yet another volume to the pop-philosophy sphere, I might have opened this book by challenging you to take up the mantle of Socrates and admit that you know nothing. Or alternatively, I might have gone on to outline a laundry list of specific difficulties that individuals and societies face, and suggest that this or that set of ideas has the power to heal the world's many problems.

Well for better or worse, that's not going to be the approach of this book. Not because philosophy can't be relevant to the real world (quite the opposite in fact, as we'll be exploring throughout our journey), but because philosophy can end up distorting our understanding when applied to the real world in overly simplistic ways. Perhaps one of the best examples of this can be found in the infamous Trolly Problem thought experiment, which has

become a staple of both Intro to Philosophy courses and pop-philosophy.

If you're already familiar with the Trolley Problem feel free to skip ahead to the next paragraph, but for the uninitiated the exercise involves imagining an out of control trolley that's on a deadly collision course with a group of people down the track. The hypothetical choice that you're offered is whether you'd be willing to pull a lever to divert the trolley onto an alternate path with just one person on it, in effect sacrificing one person to save the many. The thought experiment then asks if your decision would remain the same if instead of pulling a lever you'd be willing to shove an extremely fat man onto the tracks to stop the trolley.

The simple scenario presented by this thought experiment is meant to pose questions about the reasoning behind our ethical decisions (*i.e., why does pulling the lever not feel like murder when pushing the fat man onto the tracks does?*) And as an engaging and accessible way to spark someone's curiosity about ethics, the Trolley Problem works well enough. The only problem is that it's about as far removed from how ethics is actually practiced in the real world as controlling a video game character is from learning a martial art. For it gives the mistaken impression that ethics is primarily a form of detached intellectual *reasoning*, rather than an emotionally grounded *capacity* that one cultivates through practice. Consequently, this has the unintended consequence of painting a highly distorted picture of the domain that the Trolley Problem thought experiment is meant to illuminate. And the Trolley Problem is far from the only offender when it comes to how the misapplication of philosophy can leave us more rather than less ignorant, a subject we'll be exploring in some depth over the course of our journey.

In addition, because you know the emotional intricacies of your own life far better than I ever could, this is also not going to be a self-help book. The self-help sphere is already well populated by people far more qualified than I, and also by a motley crew of quacks and grifters. For myself, I have no desire to throw my own hat into that crowded arena.

What this book will offer you is a window into more sophisticated ways of understanding your own mind, along with some practices to begin cultivating more flexible ways of knowing and being. To that end, another one of the aims of this book is to do my small part to help relegate *if-only* ways of thinking to the trash bin, for their eventual destruction at the city incinerator.

We've all come across this sort of *if-only* framing whenever we've encountered black and white thinking about a particular subject. And if we're being honest with ourselves, just about all of us have fallen into the *if-only* trap at various points in our life. I know I certainly have on occasions where my emotional investment in a particular viewpoint has made it difficult to see the partiality of my own perspective. The recipe for *if-only* ways of thinking tend to go like this: you're presented with a complex issue that has many root causes and several potential avenues for ways that it could be addressed. Then you attempt to squeeze the issue at hand down to the more emotionally satisfying confines of an *if-only* framework.

"*If-only* organized religion were to go away…,". Or: "*If-only* we could finally throw off the shackles of global capitalism". Or: "*If-only* our nation would go back to embrace its traditional values…". Or: "*If-only* we could expose the activities of the nefarious cabal that's actually ruling the world…"

You get the picture. The common thread being something along the lines of: *"If-only everyone else had the good sense to see things from my perspective, then the world would be sane and just."*

Problem is, the real world usually doesn't work this way, as it's quite rare for large societal problems to have just a single root cause. Rather, complex problems tend to be the result of a confluence of interrelated factors. This is itself a consequence of living in a world that works through evolving *systems* which interact with one another in complex and non-obvious ways. What makes *if-only* ways of thinking misguided and potentially dangerous is that they tempt us into thinking that we know far more than we actually do about the world, which can blind us to the unintended consequences of the actions we take.

That's all very well and good, you may be thinking, *but what does any of this have to do with how our minds work?*

Well, part of my *motivated reasoning* for writing this book (more on motivated reasoning later) has to do with the ways that an inability to see the *partiality* of one's own perspective feeds into these one-dimensional ways of thinking. While it's not difficult to come up with examples of perspectives that are dangerously disconnected from Reality, what's far more challenging is the recognition that perspectives can be *true but partial*. When we say that something is true but partial, what we mean is that it may be true in a limited or qualified sense while misconstruing what's relevant for the issue at hand; either by leaving out something that's important, or by bringing in and treating as important something that's irrelevant.

To use an example from science, Newtonian mechanics are *true* in the sense that they give a good approximation of how the

macroscopic objects that we interact with in our daily lives behave. But it is also *partial* in the sense that it doesn't help us make sense of the subatomic world, or why objects gain mass as they approach the speed of light.

Fortunately a more nuanced understanding of perspectives can be cultivated, and it begins by learning how to understand the partiality of one's own perspective. Which lends itself to a more sophisticated understanding of how minds work; in particular, how your own mind works.

While the discipline of philosophy has had much to say about what minds are and how thought works, unfortunately, much of what the Western philosophical tradition has to say on this topic has been very partial indeed. This broad trend towards partially also includes how philosophy as a discipline has come to be understood in the broader culture, insofar as it paints a misleading picture of what philosophy, when it's at its best, is all about. Far too much attention is usually given to the ideas and works of long dead great thinkers within the tradition, at the expense of philosophy as a *living practice* that one actively engages in. Or to put it another way: philosophy isn't just something you read or listen to, it's something you *do*.

Mind you, this isn't a problem that's intrinsic to philosophy everywhere it's been practiced. In Eastern wisdom traditions such as Buddhism and Vedanta, philosophical theory has always been coupled to living *practices* designed to cultivate insight, such as meditation and yoga. Furthermore, these practices would typically take place among a *community* of practitioners, which emphasizes the ways that philosophy is also a social activity that's meant to be engaged in *with* other people. Without a similar tradition of practice to ground one's theorizing, much of what philosophy *is* in the West has largely been a form of

abstract theorizing; which is a remarkably *partial* approach to philosophy.

Throughout the course of our journey we'll be emphasizing how the accretion of one layer of abstract ideas on top of another can hinder rather than facilitate understanding. We'll also be investigating how an overemphasis of our rational faculties at the expense of the emotions that our rationality is grounded in paints a highly misleading picture of how we use our minds to navigate Reality. Needless to say, abstract theorizing divorced from the directness of our lived experience is not the approach we'll be taking in this book. Rather, the themes we'll be exploring have been crafted with an eye towards our interactions with the everyday world, in all its wonder and mundaneness.

Instead of theory crafting, we'll be starting with our subjective, moment to moment experience and carefully scrutinizing the implicit assumptions we attach to that experience. In doing so, we will be drawing upon the insights of a subset of philosophy known as **phenomenology**, which seeks to understand how our minds interface with Reality by scrutinizing the assumptions we attach to our direct experience. The domain that we'll be exploring with this approach is known as **epistemology,** which concerns itself with theories of knowledge, particularly with *what constitutes valid knowledge*.

The overall structure of this book is organized around *seven central themes*, with each theme being built atop the structure of the ones beneath it, like the floors of a seven story building. The executive suite which resides on the top floor is all about how to cultivate a healthier relationship with our beliefs, but the metaphorical elevator we'll be using to get there will need to pass through all of the lower stories first.

In addition, each central theme will be introduced with an *orienting metaphor* that ties the ideas which are under consideration to a relatable everyday context. It's my hope that this will provide a gentle onramp for those who are interested in understanding more about how the mind works, but haven't had the time or patience to delve into books that have been written with very little consideration for non-specialists.

One last point, but it's an important one. While it's my sincere hope that you'll find this book valuable and useful, the flipside of that is that *nothing in this book should be taken on faith.* Rather, my intention is that you test these ideas out for yourself in the laboratory of your direct experience, and see if they hold any validity for you. As such, the ongoing theme in this work that *all perspectives are partial* also applies to the perspective of this book.

An *iconoclast* is a term used to describe someone who tears down holy idols, and demonstrates that the sacred beliefs which others have invested themselves in are false. My own ambitions aren't nearly so grandiose. If this book sparks your interest enough to want to cultivate more sophisticated ways of understanding some of your taken for granted beliefs, and if you're able to relate to the world with a bit more flexibility as a result, I'll take that as a win.

Brandon Watson,
2023

GLOSSARY OF PHILOSOPHICAL JARGON

NOTE: While I've gone out of my way to reduce this book's reliance on jargon, in sections where terms from philosophy do show up their meanings will be explained as they're introduced. In addition, I've also included this glossary for your ease of reference; feel free to earmark this page and return to it as necessary. Terms with an entry in the glossary will be written in ***bold.***

Absolutization
The error of mistaking a perspective-dependent concept as an objective truth about Reality. An example would be conflating social norms that are specific to one particular culture as a fundamental law about human behavior.

Adaptive System
A unified entity which is capable of changing its behavior in response to environmental feedback. All biological organisms are examples of adaptive systems, to degrees that depend upon the complexity of the lifeform.

Affordance
An 'invitation' for interacting with something in a particular way. For example, chairs offer *affordances* for sitting, while ovens offer *affordances* for cooking.

Anthropocentric
Mistaking human centered interpretations of the world into objective features of Reality.

Archetype
Widespread, recurring patterns in our collective consciousness, which tend to pop up over and over again in stories, myths, and legends.

Autopoiesis
The capability of living systems to produce and maintain their own parts. A cut on your finger healing itself by regenerating new skin cells is an illustration of this.

Being
Refers to our most basic ways of understanding people, places, and things ***as*** people, places, and things. When we say that something ***is*** a type of thing, we are referring to its Being.

Being-In-The-World
A concept that emphasizes how our concernful absorption in the everyday world is central to our existence. It posits that the intuitive knowledge we gain from our embodied participation in everyday practices and activities is foundational for human reason.

Care
Refers to our concernful absorption within a world whose outcomes *matter to us* - arising from our existence as living organisms that have 'skin in the game' for how we interact with Reality. For instance, access to food isn't an abstraction - hunger affects us viscerally, demanding our attention and action.

Category Error
A mistake in reasoning where something is categorized in a way that's incompatible with what it truly is. Mistaking a painting of an apple as food that you can pick up and eat is an example of a category error.

Conceptual Knowledge
Refers to representational categories, classifications, and ideas that form the basis of deliberative modes of thought. Scientific understanding, reason, and beliefs are forms of conceptual knowledge.

Construct
A distinction that our minds create and sustain, which is coupled to some observation about ourselves or our world.

Construct Collapse
The process through which *social constructs* become untenable, and are eventually abandoned. This can happen as a result of their own internal contradictions, mounting external pressures, or some combination thereof.

Coping
A way of orienting oneself to an activity or set of activities that one is involved in.

Domain
A subset of the larger world that's organized around a particular category of things, ideas, or activities.

Dualism
A conceptual framework that divides phenomena into paired, oppositional categories. In everyday life, dualisms help us make sense of what we encounter in the world. 'Self and other', 'hot and cold', and 'inside and outside' are some everyday examples.

Embedded
A concept from cognitive science which proposes that a living being's behavior emerges from dynamic, ongoing interactions with its environment.

Embodied
The proposal that minds and bodies form an integrated system, and that cognition can't be adequately understood without considering how the mind is interconnected to a living body.

Emergent Novelty
New and unexpected behavioral domains which arise from the *structured* combination and interaction of less complex entities. Where the novel behavior could not be reasonably predicted from studying its constituent parts in isolation.

Enactivism
A philosophical paradigm which proposes that minds actively 'bring forth', or *enact*, a lived Reality in accordance with our living bodies and our environment.

Epistemology
A subset of philosophy that concerns itself with theories of knowledge, particularly with *what constitutes valid knowledge.*

Horizon of Significance
The background framework of meaning and importance that's informed by a shared biology and culture, around which individuals construct an individual identity.

Magical Thinking
A highly egocentric way of relating to the world, where all of Reality is assumed to revolve around one's individual

perspective. Is often paired with the expectation that one's ideas and desires control the course of events in the material world.

Mediocrity Principle
A widely accepted idea within modern science, which attests that we don't have access to a privileged position within the cosmos. The underlying intention is to avoid inserting unintentional *anthropocentric bias* into inquiries of nature

Metaphysics
A domain of philosophy that concerns itself with the overall structure of Reality. Scientific materialism (the assumption that Reality consists of matter and energy) and solipsism (the supposition that only your own mind exists) are both examples of metaphysics.

Methodology
A structured, replicable practice for guiding actions towards an intended purpose. The scientific method and mindfulness meditation are examples of methodologies.

Neologism
A newly coined term or expression that was created to fulfill a specific need, which has yet to be widely adopted into mainstream language. 'Being-In-The-World' is one such example.

Naive Realism
A common, tacit assumption that Reality is exactly how it appears to us in everyday perception, and that others perceive it in the same way.

Ontogeny
A term from biology which refers to the development of an organism over the course of its lifespan.

Ontology
A subset of philosophy that concerns itself with how we categorize things, what those things ultimately *are,* and more generally what counts as 'real'.

Paradigm
An agreed upon set of standards, practices and verification criteria for a particular domain. What is or isn't considered a relevant fact, and what does or does not constitute a valid methodology for generating knowledge is governed by the paradigm one is operating under.

Performative Contradiction
Refers to an inconsistency within a viewpoint that goes unaddressed, because it's fundamentally unanswerable; and thus is inconvenient to those who advocate for that viewpoint.

Phenomenology
A methodology for examining the mind that begins with closely scrutinizing our subjective, lived experience.

Purposive Context
Refers to activities, interests, and goals that can only be made sense of from within a given situation.

Realism
An umbrella term for ways of relating to the world which intuit that Reality has an 'absolute ground' - in essence, a fundamental basis for what's 'really real'.

Reason
Our capacity to manipulate and extend categories, using them to draw inferences, predict patterns, and reflect upon our embodied experience.

Reductionism
A means of simplifying something that's complex for the purposes of making it easier to understand and navigate. All scientific and philosophical models are forms of reductionism

Relevance Realization
A term from cognitive science for the process of determining what *matters* for a given problem.

Representationalism
A conception of mind whose roots lie in the European Enlightenment, which posits that entities have objective properties, independent of perception. According to this view, perception is a one-way of 'retrieval' of fixed features from the external world.

Satisficing
A concept from evolutionary biology which suggests that an adaptation merely has to be 'good enough' to be compatible with survival, rather than 'ideal' or 'optimal'. The elaborate, oversized tail of a peacock, which is costly to maintain and makes the animal more visible to predators, is one illustration.

Schema
Refers to an organizational structure that's constructed to represent and interpret information within a particular domain.

Scientific Method
A systematic process for investigating the *behavior* of the natural world. It uses careful observation and controlled experimentation to develop iterative, falsifiable models that distinguish true cause-and-effect relationships from coincidental patterns.

Situated
Our involvement within a given situation and context.

Situated Coping
A flexible, nonconceptually guided form of awareness that's essential for daily life, allowing us to engage with our immediate circumstances in an involved and intuitive way.

Somatic
A term which refers to ideas and practices that deal with the living, physiological body.

Transcendental
Something that literally *transcends*, or 'goes beyond', the perspective of thinking beings.

World
A cumulative whole of meaningful boundaries, patterns, and relationships for a living Being. In essence, what Reality **is** on an experiential level for a living Being.

World Disclosure
The process by which minds turn Reality into a *meaningful world* for individuals, by pre-arranging experiential reality around a being's needs and capacities.

MINDS DISCLOSE WORLDS

Orienting Metaphor :

World disclosure is the mind's way of constructing a home for us within Reality.

What Is A World?
And What Do Worlds Have To Do With Minds?

If this book can be likened to a 'guided tour' of a seven story building, where the executive suite on the top floor represents a more flexible relationship with our beliefs about Reality, then the premise we'll be exploring on this ground floor is that *minds disclose worlds*. Our orienting metaphor for this section is a *home*, and the central idea contained within is that *minds create homes for us within Reality.*

Just as a house is constructed to be compatible with the lifestyle of human beings (houses aren't built underwater, nor are their doorways accessed from the ceiling), minds construct a version of Reality for us to live within that comes *pre-arranged in terms of our needs and capacities*. The process by which minds turn Reality into a home for us to reside in is called **world disclosure.**

What a **world** refers to is a cumulative whole of meaningful boundaries, patterns, and relationships *for* a living Being. We can think of a world as what Reality *is* on an experiential level for an

individual. To **disclose** is to reveal or uncover something. So world disclosure is the process of revealing a *meaningful world* within the whole of Reality.

SIDE NOTE: The way we are using the term *world* denotes a more specific meaning than what's normally meant by '*the world*'. '*A world*' refers to an individual's experiential world. While '*the world*' is a cumulation of the broader social, cultural, and ecological environments that exist on our planet. What's being referred to here is the former rather than the latter.

What's important here is the capacity for *meaning* that's created by world disclosure. As living beings whose survival hinges on our ability to appropriately interpret and respond to what we encounter in the world, we do not and could not reside within a bare Reality. What we reside within is a *meaningful world*.

In our metaphor of home construction, houses of course don't build themselves. Rather, they are constructed *from* building materials that are put together *through* the labor of people. Likewise, minds disclose worlds *from* the opportunities and demands of a particular environment, *through* the organizational structure of a living body. And just as houses are built to different specifications for specific environments, living beings experience different forms of world disclosure based on their distinct evolutionary adaptations.

Hence, it is only through a *living body* that a mind has access to a world of people, places, and things. Which is to say, minds are inherently **embodied.** Therefore, when we speak of a mind we're also necessarily speaking of a living body as well. The term **somatic** is used to describe ideas and practices that deal with

our direct experience of the living body**.** Thus, what we are articulating is a *somatic theory of mind.*

Consequently, minds do not 'invent' worlds independently from the living body, nor does world disclosure take place in isolation from our broader shared Reality. This is because world disclosure is fundamentally *relational*. Which puts world disclosure at odds with philosophical theories such as solipsism, which deny the existence of a shared Reality beyond one's own mind.

In case the distinction between an *environment* and a *world* is still a bit unclear, an 'environment' refers to the physical and social spaces which exert evolutionary selection pressures on a living being. In contrast, a 'world' denotes the meaningful boundaries, patterns, and relationships that a mind *experiences* throughout its life.

Alternatively, we can think of worlds as what environments *become* through minds which are hardwired to experience meaning. The difference between an environment and a world can also be likened to the difference between a house and a home. For a home isn't just a physical space*,* but a *significant place* which has been suffused with a rich tapestry of familiarity and meaning.

The larger implication of all this is that minds aren't passive spectators that are 'parachuted' into a preexisting world with fixed features. Instead, minds actively shape the characteristics of the worlds they inhabit. However, this doesn't mean that minds are free to reside within just any type of world; nor are the characteristics of a world a 'choice' that individuals make. Rather, the type of world that a mind resides within is a consequence of

its bodily structure, along with the opportunities and demands of its environment.

Therefore, a world is not solely a product of a mind, nor is it an inherent feature of physical Reality. In fact, it is not a 'thing' at all! Rather, a world is a *process* that's created and sustained by the interaction of a mind and its environment. How this process unfolds for a living being is a direct consequence of how that individual uses its evolutionary adaptations to meet its survival needs. Consequently, what Reality *is* for a living being can't be asked in isolation from *what that organism does*.

Using ourselves as an example, there are aspects of our physiology that are especially important for the types of world disclosure that human beings experience. These include highly expressive and communicative faces, a bipedal posture that's oriented along a front-back axis, highly dexterous hands that are used to manipulate our surroundings, and forward facing eyesight that serves as our primary navigational sense.

A World Of Affordances

Crucially, these structurally significant aspects of our physiology (our bipedalism, our hands, and our eyesight, to name just a few) play a role in determining the types of **affordances** that our worlds contain. An affordance can be thought of as an invitation to interact with something in some particular way. For example, a chair offers *affordances* for sitting, while a hammer offers *affordances* for hammering.

Importantly, affordances aren't something that we're consciously aware of most of the time; rather, they play a role in *how objects show up for us* in our lived experience. It's simply *obvious to us* that chairs are for sitting and hammers are for hammering. Of course, that's not to imply that objects invite us to interact with them in only one way. A hammer can be used to drive nails into wood, but it can also be used to cave in someone's skull. The particulars of what any given affordance will be aimed at will largely depend on the demands of the *situation* that one is absorbed in.

While this *situational* aspect of affordances will be delved into more fully in our next chapter on *Situated Coping,* what's important for our present purposes is that affordances are highly *flexible*. Their underlying purpose is to help us navigate the complexity of Reality by highlighting what's relevant for our needs and purposes within any given situation; making them essential for daily life. Moreover, this inherent flexibility is what makes worlds which are structured in terms of affordances ripe for *improvisation,* which allows us to adapt to a vast repertoire of novel situations.

A good case study of the role that worlds structured in terms of affordances plays in our basic perceptions of Reality can be found in how *our perception of objects* is a consequence of this organizational structure. And it's to *objects* that we now turn.

Scrutinizing The Objective View Of Objects

By this point, we've sketched out a rough outline for how our minds create homes for us within Reality via *world disclosure*. We've also explored how *affordances* help us relate to our surroundings, and why experiential worlds that are disclosed to us in terms of affordances are ripe for improvisation. Now we'll be using what we've learned to scrutinize some of our basic assumptions about Reality.

To that end, we can think of this section as a detour to an exhibit known as 'The Hall of Objects'. As indicated by the writing on our imagined signpost, we'll be using world disclosure as a lens for understanding *objects*. Precisely because object perception is so foundational to what Reality *is* for us, an understanding of this process can reveal just how much work our minds are doing behind the scenes to present us with a comprehensible Reality.

Let's begin by clarifying what this conventional understanding of objects actually entails. If we examine these commonsense intuitions, we discover that everyday perception is grounded by an intuition that objects are *independent* of our sense perception. This is why, for instance, it's blindingly obvious to us that a material object (such as a book) continues to exist in the same way regardless of whether or not someone is there to observe it. Stated more precisely, everyday perception **absolutizes** objects, meaning that we perceive them to be fixed and unchanging, unless acted upon by something within physical Reality. We'll refer to this conventional wisdom as the *Objective View*, because it's rooted in an implied objectivity which uses a 'view from nowhere' as a framework for understanding objects.

Before exploring its limitations, let's pour one out for common sense by clarifying what the Objective View gets right. Doing so will highlight its inherent utility, in spite of it not being a comprehensive framework for understanding Reality. As our intention isn't to 'debunk' common sense, so much as it's an effort to provide a more nuanced perspective which *transcends and includes* its valid insights.

So what does the Objective View accomplish for us? Well, quite a lot actually, as the Objective View does indeed point towards a *partial truth*, and a very important one at that. Which is that the objects we encounter have a 'realness' to them which extends beyond the immediacy of our sense perception, and that our individual perspective is not the center of Reality. Together, these two intuitions are grounded by the more general observation that Reality doesn't bend to our will in 'magical' ways. It should be relatively unsurprising then that the Objective View is an antithesis to **magical thinking**. Magical thinking is the default form of world disclosure for young children, and evident in the narratives and myths of our early ancestors, whose experience of Reality was that of a 'spirit haunted world'.

A hallmark of magical forms of world disclosure is that they are highly *egocentric*, anchored as they are in an embryonic sense of Self that's enmeshed with its surroundings. Individuals who are immersed in this form of world disclosure have yet to fully disentangle their thoughts and emotions from our broader shared Reality. Patterns and phenomena that one experiences at this developmental stage tend to be highly anthropomorphized; everyday events given fantastical explanations. (*The sun rises every morning because that's when mommy takes me to school*.

The toy fell over because it was sad. Everyone in the world sees what I see and hears what I hear.)

If a child's cognitive development proceeds normally, magical forms of thinking tend to be supplanted by something resembling the Objective View by the time a person reaches adolescence. While the advantages of the Objective View over magical thinking should be fairly obvious, if stated explicitly they entail: (1) Access to much more reliable knowledge about Reality. (2) A greatly expanded ability to take the perspective of others.

So for most everyday purposes, the Objective View of objects serves us perfectly well because it's grounded in practical, survival oriented adaptations. A common misconception about survival adaptations is that evolution selects for traits which are 'optimal'. In reality, much of an organism's physiology will be unrelated to its survival; the incidental byproducts of other adaptations. And for any given adaptation to stick around, it simply has to be **satisficing**, i.e., 'good enough' to be compatible with survival.

This principle holds true not only for physiological adaptations but behavioral ones as well, including our common sense. Fortunately, human achievements have far exceeded what could be reasonably deduced from the axioms of natural selection, allowing for a more complete understanding of Reality than what's possible through common sense.

Note the use of 'complete' instead of 'accurate', as the primary limitation of the Objective View isn't that it is *inaccurate;* it is that it's instead *highly partial.* Insofar as it doesn't emphasize the extensive work that our minds are doing behind the scenes to

present us with a comprehensible world, the Objective View overlooks a vitally important aspect of what objects fundamentally are.

This is perfectly fine for the Objective View's underlying purpose of allowing us to navigate and manipulate surroundings. However, it becomes a serious hindrance when the Objective View, which is essentially a survival adaptation, is mistakenly projected as an *absolute truth* about Reality.

Objects Are Mentally Constructed (But *Not* Imaginary)

In this section, we'll be introducing an alternative to the common sense*, or* Objective View, of objects. Because this alternative is grounded in the *world disclosure* process we've been exploring, we'll refer to it as the Disclosive View.

In contrast to the Objective View's insistence that objects are *absolute* features of Reality, Disclosive View contends that objects are more akin to a *lens* for navigating Reality. This makes them fundamentally *experiential,* as they're how our mind turns our surroundings into something that's comprehendible for us.

In essence, objects are a type of *interaction* which happens between our embodied minds and our surroundings; neither existing 'out there' in some external Reality, nor as a pure fabrication of the mind (distinguishing them from hallucinations, which present us with non-existent phenomena). In sum, the gist of the Disclosive View is that *objects are mentally constructed (but not imaginary)*.

Before proceeding, let's first clarify what a *mental construct* is. What a mental construct (or just a **construct**, for short**)** refers to is a distinction that our minds create and sustain, which is coupled to some observation about ourselves or our world.

If we think more deeply about what an object actually is, it's our mind's way of drawing a boundary around some portion of our local Reality. The advantage of carving up Reality in this way is that it allows us to relate to what's contained within a given boundary in a more concrete way (*as* a house or *as* a chair, for example). As such, the boundaries which mark where one object ends and another begins are *not arbitrary;* rather, they are *functional* in nature. They are our mind's way of packaging our surroundings into more manageable 'chunks' that are easier to interact with and understand.

Because this point can be easily misconstrued, the contention here isn't that objects are 'imaginary' (like how Santa Claus and the Tooth Fairy are imaginary). Instead, what's being pointed out is that objects are the products of a *cognitive process* that puts us in direct contact with the world. As living beings that are adapted for survival, objects would be useless to us if they didn't convey generally reliable information about Reality. This also explains why there's a valid distinction between *objects* and *hallucinations*, despite both being mentally constructed. Since the former puts us in touch with our surroundings and our environment, while the latter does not. Hence, objects are mentally constructed, but not imaginary.

The Disclosive View As A Window Into Visual Perception

An illustrative case study for how the Disclosive View can help us explain and interpret our embodied interactions with the world can be found in a survey of how our visual field is organized. What we'll be articulating here is a *phenomenological* account of how objects are disclosed to us through visual perception (recall that **phenomenology** concerns itself with how things *show up for us* in the directness of our lived experience).

Let's first acknowledge that not having access to eyesight doesn't preclude an individual from experiencing objects. Minds are inherently adaptable, so a perceptual system without access to eyesight has other avenues for object disclosure, such as touch and sound. For our present purposes however, we'll focus on the primary means by which objects are disclosed to human beings, which is through vision. For those with functioning eyesight, our perceptual system organizes visual input along a *subject-horizon* **schema.** (A *schema* just refers to a template by which something is organized).

In practice, this *subject-horizon* schema highlights whatever visual phenomena we happen to be focusing on as a 'foreground' (i.e., a subject) which is contrasted against a 'background' (a horizon). The boundary that marks where a subject ends and the horizon begins we experience as *the edges of an object;* be that a blade of grass, or a printed word on a page. For things that extend beyond our field of vision, like the interior of a room, the unified whole that we experience is akin to a mental composite, composed as we move our eyes around, taking in details.

Crucially, these subject-horizon schemas are not predetermined. Instead, their boundaries have an inherent flexibility that's dependent upon the context in which we're viewing something. A well-studied side effect of this flexibility are optical illusions. Optical illusions aren't a case of our visual system 'malfunctioning', as common sense might attest. Instead, they are a consequence of the fact that our sense perception is tailored for coherence and intelligibility; not to recover fixed features from a 'neutral' Reality.

While contemporary common sense might tempt us to analogize our visual perception to a video camera, in actuality the embodiment of our minds and our perceptual system tells a very different story. The roots of this misleading metaphor stems from a fundamental misunderstanding of what sense perception is all about. As living beings, our survival depends on being able to flexibly cope with the complexities of a fluid environment. A perceptual system that functioned like a mechanical recording device wouldn't be up to the task of providing focused information that's *relevant* for our needs and purposes.

The reason that this matters is because the overwhelming majority of what we might potentially encounter within Reality is irrelevant for us. Consequently, our perception is just as much a process of filtering out a near infinite stream of irrelevant stimuli as it is a process of presenting with us sights and sounds and tactile sensations. The fact that your nose isn't visible to you right now, despite it lying within your visual field, is good evidence of this.

As it turns out, we're capable of attending to only a tiny part of our visual field at any given moment. While our entire field of view spans about 180 degrees horizontally and 135 degrees

vertically, only 2 degrees of that field consists of the highly detailed images that we associate with 'what it's like' to have vision. This high detail portion of your visual field is associated with the *fovea centralis,* which is the region of your eyes where the light sensitive photoreceptor cells known as cones are most densely packed. From here, the rest of your visual field gradually widens out into a low acuity no man's land of rough and tumble nebulosity. Where we can't make out much more than some basic impressions of shapes, colors, and movement. If you doubt this, try affixing your eyesight on a focal point that's a few inches away from this page, and see if you're still able to make out any of the words in this paragraph.

It may be a bit surprising to discover just how small a portion of our visual field this high detail focal area actually is. Yet when everything is functioning properly, this system works so well that the blurry no-man's land which takes up the majority of our visual field isn't a hindrance to us in practice. In practice, we're scarcely aware of it most of the time, which is indicative of its efficacy.

How Embodiment Grounds The Disclosive View

And with that, we've reached the end of our journey down 'The Hall of Objects'. To summarize, we began by calling into question the commonsense assumption that objects are ready-made entities that exist 'out there' in some external Reality. We offered an alternative perspective called the Disclosive View, which contends that objects are more akin to a *lens* for navigating Reality. The key recognition of this view is that objects are mentally constructed, but not imaginary.

Using our visual field as a case study, we delved into how much work our mind and body are doing behind the scenes to present us with objects. We also explored why a recording device like a video camera is an inaccurate metaphor for how our sense perception works, as our sense perception evolved to give us highly focused information that's relevant for our needs.

In sum, imaginatively projecting ourselves into a 'view from nowhere' can be a useful tool for forming broad observations that are applicable for many different points of view. But this comes with the caveat that we can never fully abstract ourselves away from the immediacy of our first-person, embodied perspective. Instead of attempting to bypass this embodied perspective, far better to acknowledge it, so that we can integrate it into our theories about Reality.

Onwards To Ontology

With the 'Hall Of Objects' behind us, the next task on our itinerary is to tie what we've learned about perception to the immediacy of our embodied interactions within the world. To that end, we'll be delving into an investigation of **Being.** If your eyes glazed over at the mention of such a seemingly abstract subject, I'm right there with you, dear reader. But if you'll indulge me, I'd like to make a case that this topic doesn't have to be a form of armchair navel-gazing that's disconnected from daily life. Quite the opposite in fact, as we'll be demonstrating how Being is an essential aspect of everyday Reality; a direct outcome of our

concernful absorption within a world whose outcomes *matter to us.* And that ultimately, Being is rooted in our capacity for *care*.

Before we begin, let's take a moment to clarify the methodology we'll be using for our investigation, which is grounded in phenomenology rather than abstract metaphysical theory. What this means is that our exploration will be guided by an analysis of our lived experience, rather than armchair speculation about the nature of life, the universe, and everything.

The branch of philosophy that deals with questions of Being is known as **ontology.** Ontology concerns itself with how we categorize things, what those things ultimately *are,* and more generally what counts as 'real'. When we assert that something *is* (or is not) a particular type of thing, we are making an ontological statement about its Being. Some examples of questions that would fall under the domain of ontology include: What makes something a house, or a person, or an ecosystem? Are viruses a form of life? Is a hot dog a sandwich? In essence, the content of ontological inquiries can include basically anything we might conceivably come across within Reality, from subatomic particles to junk food.

Broadly speaking, there have been two philosophical approaches to ontology. These are *ontology as metaphysics* and *ontology as phenomenology.* What **metaphysics** refers to is speculation about the overall structure and purpose of Reality. Metaphysical ontology is the more abstract of these two branches, since it involves speculation into the underlying essence of entities. When Aristotle ventured that all objects were made of earth, water, air, and fire, he was pursuing a metaphysical approach to ontology. Or when religious believers contend that our true essence is housed in an immortal soul, and atheists retort that

souls don't exist, both sides are engaging with ontology through metaphysics.

Though metaphysical ontology is indeed the more esoteric of these two branches, thoughtful applications of it can lead us to real insights about Reality. For instance, the ancient Greeks developed an ontology of atoms long before humanity had a means to verify this intuition. Good metaphysical ontology can serve as a jumping off point for more rigorous forms of empirical investigation. Without it, scientists wouldn't have developed many of the intuitions that led to world changing discoveries.

So that's metaphysical ontology. As to its counterpart, recall that **phenomenology** is a methodology for scrutinizing our direct experience. While metaphysical ontology tries to understand *what Reality is* apart from our perceptions, phenomenological ontology concerns itself with how Reality is *experienced* from a first-person point of view. Metaphysical ontology adopts a 'view from nowhere' that aims to minimize individual subjectivity when thinking about phenomena. While phenomenological ontology concerns itself with how phenomena are experienced and interpreted. We can think of the former as the 'outside-in' approach to ontology, and the latter as the 'inside-out' approach.

As to which of these two approaches is 'better', that depends upon what one is trying to understand. For domains like physics, cell biology, or computer science that lend themselves to external observation and analysis, metaphysical ontology is perfectly well-suited. But for domains that deal with inner-landscapes that are resistant to external observation, the phenomenological approach is more appropriate.

As the purpose of this guided tour is to cultivate a more sophisticated understanding of how our minds work, our ontological approach will be rooted in phenomenology. However, it's worth acknowledging that in practice these methodologies tend to bleed into each other. As phenomenological accounts almost always include some implied metaphysics, and metaphysical accounts are always created from a particular perspective.

Having set the stage for our investigation, let's begin sketching a more detailed portrait of what 'Being' is all about. As this phenomenological account will help us connect Being with world disclosure.

Being. What Is It Good For?

To illustrate the practical, everyday relevance of Being, let's return to our guiding metaphor for this chapter: that minds create homes for us within Reality. When we think of what a home is, what sorts of feelings do we normally associate with it? If our living situation is relatively healthy, home tends to be associated with a sense of comfort and familiarity. In essence, homes are a place where we can feel at ease within the world.

Reflect on the ease with which you're able to perform literally hundreds of everyday tasks within your home, such as turning on a light switch, brushing your teeth, or flushing a toilet. Actions that we're so habituated to that they're more or less automatic. This is possible because world disclosure grants us access to a prereflective form of understanding that makes all of this *exceedingly easy for us* - an understanding of **Being.**

It's through Being that we're able to make our most basic and primordial discernments about what we encounter within Reality. Being is how we understand a tree *as* a tree or a person *as* a person, in a direct and intuitive way. It's the means through which phenomena like trees and homes and people are first disclosed to us as *distinct entities,* which we can relate to in some way. Allowing them to become *meaningful* for us. So when we mention *an understanding of Being*, it's to this that we're referring.

So when we refer to the 'Being' of something, we are *not* referring to the substances that it is made out of (like how molecules are made of atoms, or candles are made of wax). This is because Being isn't a substance, nor is it a property of entities. Rather, Being is a form of *understanding;* an aspect of how we perceive Reality that doesn't exist outside of our lived experience.

The misconstrual of Being as synonymous with 'what things are made of' is part and parcel of *metaphysical ontology*, which attempts to explain Being from an 'outside-in' vantage point. While knowing what things are made is of course very useful, we shouldn't confuse this with an entity's Being. This is because knowing *what things are made of* is itself derived from Being, because Being is what allows people, places, and things to be comprehensible as distinct entities in the first place.

The central utility of Being is that it allows us to understand a great deal about our surroundings in a direct and intuitive way, prior to any conscious effort on our part. In fact, this primordial form of knowledge is so intertwined with how we perceive the world that it's ordinarily invisible to us.

For instance, have you ever wondered how you're able to instantly and effortlessly recognize the faces of friends and family? Or when you're surveying the contents of an unfamiliar dining room table, how the question of which items are food and which aren't is normally so immediately obvious that it never even occurs to us? Or why interacting with doorknobs and chairs and eating utensils is so effortless that our use of these items is for all intents and purposes automatic?

If we want to understand how all of this is so exceedingly easy and intuitive for us, recall the guiding metaphor of this chapter - that minds turn Reality into a home for us through world disclosure. And that the purpose of world disclosure is to turn our environment into a *meaningful world* that comes pre-arranged in terms of our needs and capacities. Being, then, is the foundational mechanism through which our encounters with Reality are able to become *meaningful* for us.

For something to be *meaningful*, it must be both *intelligible*, or clearly identifiable as a distinct type of thing, and *relevant* to us in some way. Yet the truth of the matter is that the vast majority of things that we might conceivably encounter within Reality fulfill neither of these criteria. Thus are they excluded from the types of world disclosure we normally experience.

Scientific knowledge tells us that we live in a Reality that's saturated with radioactive decay, subatomic particles, and relativistic time dilation. And that's all true enough. But in the vast majority of everyday situations, these aspects of Reality are disconnected from our needs and capacities. Thus, they may as well not even exist for us in our everyday Reality.

This makes a good deal of sense when we recognize Being's underlying survival function, which is to allow us to quickly and easily make basic discernments about what we encounter in the world. If our ancestors didn't have a quick and effortless way of assessing what aspects of their environment were relevant for survival, we wouldn't be here today. As powerful as our rational faculties are, they're too slow and cognitively expensive to be of much use when a predator is jumping out at you from the bushes.

With this adaptive purpose in mind, we can see why it is that Being is more fundamental than what 'things are made out of'. In essence, metaphysical approaches to Being are committing a **category error**. Category errors occur when something is mistaken for a fundamentally different type of thing than what it truly is. An amusing example of a category error are apocryphal stories about early film audiences panicking at the depiction of oncoming trains, having never seen a movie before.

The category error that metaphysical ontology commits in regards to Being is that it misconstrues an aspect of our lived experience into a fixed property of material objects. As our phenomenological account has hopefully made clear, Being isn't something that exists apart from us, 'out there' in some external Reality. Rather, it's a part of our embodied experience that's fundamental to how we interact with the world.

The Care That Binds

So far on our 'guided tour', we've become acquainted with how minds turn Reality into a home for us through world disclosure.

From this, we familiarized ourselves with the vital role that Being plays in our navigation of everyday reality. Now we turn our attention to the core foundation upon which Being rests, which is a capacity for **Care.** What Care refers to is our concernful absorption within a world whose outcomes *matter to us*. Care, then, is the canvas upon which all forms of meaning are painted; lying at the heart of everyday practices and activities which root us in the world. So to say that Care is 'important' for us is putting it rather mildly.

To illustrate the fundamental necessity of Care, we'll be situating it within the underlying biological framework that living minds are embedded in. In essence, what we'll be doing here is mapping out a *genealogy of Care.* Our aim is to offer a plausible account of how Care is an outcome of the underlying organizational structure of biological organisms. Doing so will help us untangle why Care seems to be a unique capacity of living beings. And consequently, why it's entirely absent from non-living entities, such as learning algorithms on digital computers.

Moreover, this genealogy of Care will contextualize one of the central features of our existence: that our experience *matters to us*. Yet much like the parable of the fish who asks 'what the hell is water?,' the challenge of our venture stems from the fact that aspects of our existence that are closest to us can be among the most difficult to notice and convey.

While phenomenology is especially well suited for uncovering aspects of our experience that are ordinarily hidden from us, there are of course limits to what we can learn from it. This is hardly surprising, since the same holds true for every methodology. In essence, no single methodology can teach us everything there is to know about Reality - be that science,

philosophical analysis, or a lifetime of spiritual practice. This is why meditating in a cave isn't a suitable replacement for scientific inquiry about the natural world, and why science knowledge isn't a suitable replacement for existential questions about the meaning of life.

With this in mind, we'll be complimenting our phenomenological method with *Systems Thinking*. Systems Thinking is a framework for understanding how systems behave and change over time. Where the focus is on the web of relationships that complex phenomena are sustained by. By integrating Systems Thinking into our genealogy, we can gain valuable insights into how Care arises from the intricate tapestry of processes that sustains living beings.

If we take a step back to consider why Life is such a remarkable addition to our universe, much of it has to do with Life's incredible capacity for emergent novelty. **Emergent novelty** refers to new and unexpected behavioral domains which arise from the *structured combination* of less complex entities. *Complexity* being a measure of the interconnections and dependencies an entity is sustained by.

An important aspect of emergent novelty is that the behaviors and properties it gives rise to aren't something that could be predicted from studying its constituent components in isolation. For example, there's nothing about organic molecules which would lead us to expect that an entity composed of these elements could produce *Romeo and Juliet*.

Consequently, in any sort of analytical approach, care must be taken that structurally significant differences between entities from different domains aren't being flattened. This is why, for

instance, you can't just selectively apply principles from quantum mechanics to try and explain consciousness, even though the living body that sustains our mind is composed of organic particles. Or why attempting to draw inferences about human social hierarchies from the behavior patterns of wolves or lobsters is misleading, despite humans and wolves and lobsters having a shared evolutionary lineage.

One fallacy that arises from getting this wrong is **reductionism**; (oversimplifying complex things to the properties of their constituent parts). Another is **elevationism** (bringing in properties and behavior that only emerges at higher levels of structural complexity). Physicalist conjectures that consciousness can be explained through the laws of physics is an example of the former. Projecting thoughts and emotions into non-living entities, such as computer learning algorithms, is an example of the latter.

With these cautionary guidelines in mind, let's return to our discussion of emergent novelty. The conditions for emergent novelty arise when complex systems become structurally coupled to one another through ongoing reciprocal relationships. We can find an example of this even in supposedly 'simple' single celled organisms, whose existence is sustained through coordinated information and energy exchange, in the forms of DNA replication and metabolism respectively. Additionally, the processes that sustain our 'simple' organism are themselves embedded within a web of relationships with other entities in its environment. The scientific term for this 'web of relationships' is one that you're likely to be familiar with already - 'ecology'.

While this type of organizational structure can, with enough time, lead to a remarkable degree of emergent behavior, it's also

something of a double edged sword. One consequence of this layered complexity is the relative fragility of lifeforms, reliant as they are on maintaining a delicate internal equilibrium known as *homeostasis* to sustain their existence.

As an illustration of what makes living beings structurally distinct from non-living entities, consider the celestial bodies where the heavy elements that life is composed of were originally formed. Stars are particularly intriguing for this purpose because they share a crucial characteristic with lifeforms, since both rely upon an internal equilibrium to sustain their existence. This shared reliance upon internal processes that will eventually cease functioning is why we're able to analogize that stars have a 'life cycle' that ultimately ends in their 'death'. (Keeping in mind that this is only a helpful metaphor, as stars aren't literally 'alive').

Despite this shared similarity, there are crucial differences in how both types of entities maintain their internal equilibriums. In contrast to the web of relationships that living beings depend upon for homeostasis, a star's homeostasis is sustained by a balance of two forces - the inward pull of gravy, and the outward pressure of nuclear fusion. The comparative simplicity of this internal structure is what gives stars their very high degree of stability, as even the most short-lived stars have a lifespan that lasts for several million years. One consequence of this is that stars are relatively self-sustaining, rendering them much less susceptible to disruptions that could alter their underlying structure. There aren't a lot of things within this universe that can cause a star to stop behaving like a star. While there are innumerable things that can disrupt the delicate information and energy exchange systems that sustain a living being.

In essence, as a system becomes more complex, the conditions under which it can continue to exist as a unified entity tends to become more constrained. This brings with it added *fragility.* For instance, while the cells that your body is composed of do have rudimentary survival requirements, human beings have a whole host of highly specialized needs which are absent at lower levels of structural complexity. Tissues and organs don't require meaning and companionship; living people do.

Of course, this drawback is compensated for by the added behavioral *flexibility* that increased complexity can facilitate. While more complex entities have a greater variety of more specialized needs, added complexity also brings with it a wider variety of mechanisms to acquire what that entity needs to sustain itself. One way of referring to entities that are capable of adjusting their behavior in response to environmental feedback is as an **adaptive system.**

It's within this interplay of *fragility* and *flexibility* that a capacity for Care can emerge. Care doesn't serve a functional purpose for an adaptive system unless two key conditions are met: (1) It must be *fragile* enough that interactions with its environment have a significant potential to alter it in irreversible ways. (2) It must have *flexible* mechanisms for responding to many different kinds of environmental feedback. In other words, Care is only useful if there's something vital that's at *stake* for an entity, and if it's in a position to *do something about it.* As far as we know (keeping in mind that new discoveries could alter this understanding), only living beings are capable of fulfilling both of these criteria.

The relevance of this interplay to our daily lives stems from how it shapes our lived experience in the world. Consider the

innumerable ways in which things can go badly for us if our varied and complex needs go unfulfilled (pointing to our *fragility*). Along with our vast repertoire of behaviors for meeting those needs (evidence of our *flexibility*). The dynamic interplay between our inherent fragility and flexibility is what allows our interactions with the everyday world to be impactful for us. For an interaction to be *impactful* means that it can play out in ways that can lead us to appreciably different outcomes.

When we reflect upon the innumerable ways, both large and small, that our everyday interactions can be *impactful* for us, we can begin to appreciate just how embedded we are within Care's embrace. This embeddedness entails a particular relationship to Reality: that of *engaged participants*. In other words, we have 'skin in the game' for how we interact with the world around us, which precludes us from having a 'neutral' relationship to Reality.

As living beings, we're thrust into a world that we didn't choose or create, which is nonetheless highly impactful for us. This means being through Care to a **Horizon of Significance,** which is a reflection of what we need from Reality to sustain ourselves, and cope with the demands of our current situation.

To really drive home what it is that Care does for us, reflect on how we ordinarily have little trouble ascertaining what's relevant for our needs within any given situation. We intuitively know to seek out food when we're hungry, clothing or shelter when we're cold, a source of light when it's too dark to see our surroundings. In each of these instances what's relevant for the situation we're absorbed in is obvious in an immediate and visceral way. Precisely because Reality can have quite severe consequences for us if we get this wrong, billions of years of evolution have

geared the whole of our being towards getting this, if not optimally correct, at least approximately right most of the time.

All of which leads back to the core theme we've been exploring in this section: *that Care is foundational for minds because Reality has consequences for us.*

With this core theme in mind, we'll wrap up this first leg of our journey by applying it to a domain that's increasingly prevalent in the modern world: artificial intelligence. Precisely because the programs manage to emulate aspects of living minds without life's underlying organizational structure, an analysis of AI's limitations offers a compelling illustration of why Care is so significant for us.

Conclusion : What Artificial Intelligence Can Teach Us About Minds

As of the time of this book's writing in 2023, machine learning algorithms such as ChatGPT have advanced to the point where their responses to questions can correspond to an impressive degree with how human beings use written language. ChatGPT's ability to incorporate context in conversationally appropriate ways makes interacting with these models feel uncannily natural at times. Of course, training an AI language model to interact with humans in ways that feel natural is far from an easy

problem to solve, so all due credit to AI researchers for their accomplishments.

Yet in spite of all this, it's also accurate to point out that artificial intelligence programs don't actually *understand* anything. This is because understanding involves far more than just responding to input in situationally appropriate ways. Rather, understanding is grounded in fundamental capacities that machine learning algorithms lack. Foremost among these is a form of concernful absorption within a world of lasting consequences; i.e., capacity for Care. To establish why understanding is coupled to Care, it will be helpful to explore what it means to understand something.

To understand something means to engage in a process of *acquiring*, *integrating*, and *embodying* information. Breaking down each of these steps in a bit more detail : (1) *Acquisition* is the act of taking in or generating new information. (2) *Integration* involves synthesizing, or differentiating and linking, this new information with what one already knows. (3) *Embodiment* refers to how this information gets embedded into our existing organizational structure, informing the ways that we think and behave. What's important to note about this process is that it ends up *changing us* in some way. Moreover, the steps in this sequence are fundamentally *relational*, stemming from our interactions with the world.

While machine intelligence can be quite adept at the first stage of this sequence, owing to the fact that digital computers can accumulate, store, and access information far more efficiently than a human being, it's in the latter steps that they fall flat in comparison to living minds. This is because *integration* and *embodiment* are forms of growth that stem from how minds are

interconnected to living bodies. In contrast, existing forms of machine intelligence are fundamentally *disembodied*, owing to the fact that digital computers are organized around wholly different operating principles than that of living organisms.

For minds that grow out of living systems, interconnections between a body and a mind, and between a body-mind and an environment, is what allows interactions with Reality to be *consequential* for us. This is an outcome of the fact that our mind's existence is sustained by the ongoing maintenance of our living bodies, and vice versa. If our living bodies fail, our minds fail. Likewise, if our minds fail, our bodies will soon follow, unless artificially kept alive through external mechanisms.

Another hallmark of living systems is that they're capable of producing and maintaining their own parts; in fact, your body replaces about one percent of its cellular components on a daily basis. This is evident in the way that a cut on your finger will heal, and within a few days effectively erase any evidence of its existence. One term for this ability of biological systems to produce and maintain their own parts is **autopoiesis** (*a combination of the ancient Greek words for 'self' and 'creation'*).

The basic principles behind autopoiesis don't just hold true for your skin, but for your brain as well. While the neurons that make up your brain aren't renewed in the same way that skin or bone cells are, the brain itself has a remarkable degree of *plasticity*. What plasticity refers to is our brain's ability to adaptively alter its structure and functioning. And the way that our brains manage to do this is through changes in how bundles of neurons (known as 'synapses') are connected to one another.

How we end up using our mind has a direct (though not straightforward) influence on the strength of synaptic connections between different regions of our brain; which in turn influences how our mind develops. Accordingly, this is also the reason why the science fiction idea of 'uploading' a person's mind to a computer is pure fantasy, because how a mind functions is inextricably bound with the network of interconnections in which that mind is embodied.

This fundamental circularity between our autopoietic living body and our mind is the foundation of embodied intelligence, which is what allows us to engage with the world through Care. Precisely because autopoietic circularity is so tightly bound with feedback mechanisms that are inherent to Life, it's proven extraordinarily challenging to create analogues for this process in non-living entities. It's yet to be demonstrated whether or not autopoietic circularity can be replicated, even in principle, through the system of deterministic rules that governs digital computers.

Furthermore, giving machine learning models access to a robotic 'body' isn't enough, on its own, to make these entities truly embodied. This is because embodiment involves far more than having access to and control of a physical body. Rather, embodiment is a way of encapsulating the rich tapestry of interconnections between an intelligence and the physical processes that grant it access to a world (keeping in mind that everything that your body does, from metabolism to sensory perception, is a type of process).

For the sake of argument, however, let's assume that the challenges involved in the creation of embodied artificial intelligence are ultimately surmountable. Because embodiment

is coupled to a capacity for Care, the creation of embodied artificial intelligence has the potential to open a Pandora's box of difficult ethical questions that we may not be prepared for (and this is in addition to AI's other disruptive effects). Precisely because Care is grounded in interactions having very real consequences for a being, by extension this also brings with it a possibility for suffering.

For human beings, having adequate access to food, safety, companionship, and opportunities to self actualize aren't abstractions, nor are they something that we relate to in a disengaged way. Rather, as beings with a capacity for Care, when we're deprived of what we need from Reality, we end up suffering in real ways. Assuming that the creation of non-living entities with a capacity for Care is even possible, it would behoove us to tread extraordinarily carefully since this could result in beings with a capacity to suffer in ways that we might not be able to fully understand or imagine (since it's likely that their needs may end up being considerably different than that of a living being).

And of course, there's the undeniable fact that humanity, as a whole, has had a rather poor track record when it comes to how we respond to those that we don't understand. For some perspective, it's only relatively recently that the idea of universal human rights achieved some modicum of acceptance in our emerging global society, and our world still has a long way to go towards the actualization of these professed ideals. By extension, our world's circle of concern hasn't expanded to include the suffering of animals in factory farms, let alone to non-living entities that have the potential to be far more alien to us than cows or chickens. Of course, that's not to imply that 'humanity' is a monolith that will respond to AI in just one way. Rather, the ways that beings of this type will be treated are likely

to be as diverse as the multitude of ways that people treat one another.

Of course, all of this is assuming that the obstacles on the road to embodied artificial intelligence are surmountable, which is far from a given. It could very well be that the creation of non-living entities with a capacity for understanding is beyond what the axioms of what the rules of digital computation allow for. And that apparent progress towards machine understanding is analogous to thinking that one has made tangible progress towards reaching the moon because one has managed to climb halfway up a very tall tree. Yet given the enormity of the stakes involved, it's a possibility that's worth taking seriously. For what it's worth, we'll be in a much better position to chart a wise course for the challenges that lie ahead if we approach it with a higher degree of self understanding. Which brings us back to the guiding purpose behind the journey that we're undertaking. Namely, that more epistemic awareness around how our minds work can help us navigate our world in more compassionate and productive ways.

And with that, we've reached the elevator that will take us from the ground floor to the next section of our 'guided tour', which will be an in depth exploration of *knowledge*; what it is, how we acquire it, and how it's connected to *truth*.

Chapter Summary

- **World disclosure** is the process by which our minds turn Reality into a home that we can reside in. Minds do so by constructing meaningful worlds that come pre-arranged

in terms of our needs and capacities. World disclosure is an outgrowth of how our minds are inherently *embodied;* which is to say, of how our mind and body form an integrated living system.

- **Affordances** are an aspect of world disclosure that helps us navigate our surroundings by 'inviting' us to interact with things in concrete ways. Because affordances are highly flexible, the experiential worlds we inhabit are ripe for *improvisation*.

- World disclosure extends to how we perceive objects, in that objects are mentally constructed, but not imaginary. A **construct** is a category or boundary that our minds create and sustain, which is coupled to some observation about ourselves or the world.

- **Phenomenology** is a branch of philosophy that deals with how things show up for us in our lived experience.

- **Metaphysics** refers to what the overall structure and purpose of Reality is thought to be. The metaphysical assumptions behind a particular idea or activity can be either explicit or implicit.

- **Being** is foundational to how we navigate Reality, since it's what allows us to understand things as distinct entities in an immediate and pre-reflective way. Being is our most basic way of understanding a tree *as* a tree, or a person *as* a person. When we say that something *is* a type of thing, we're referring to its Being.

- **Care** refers to our concernful absorption within a world whose outcomes matter to us in some way. Care is an outcome of the autopoietic organizational structure of living beings, which grants living beings a high degree of both *fragility* and *flexibility.*

- **Autopoiesis** is a property of the organizational structure of living beings, which allows them to create and maintain their own parts. The ability of your body to replace aging and damaged cells is an example of autopoiesis. Autopoiesis is a large part of what makes living beings distinct from non-living entities such as AI.

KNOWLEDGE IS MOSTLY SITUATED COPING

Orienting Metaphor :

Situated coping is our 'vehicle' for engaging with everyday Reality, while concepts resemble a GPS that's used for navigation

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How To Cope With A World

On the ground floor of our 'guided tour' we were introduced to some foundational concepts that will accompany us on the exploratory journey that lies ahead. In the course of our investigation, four vital threads emerged: (1) How minds turn Reality into a home for us through *world disclosure*. (2) The importance of the *living body* to what minds are and how thought works. (3) *Being's* centrality as a foundational form of understanding. (4) The unifying role that *Care* plays in how living minds navigate Reality.

Equipped with this conceptual toolkit, the next leg of our journey leads us into the depths of **epistemology,** a fascinating domain where we'll be grappling with the nature of *knowledge itself*. Consider: how do we come to know things? What's a realistic level of certainty for what we know? Is knowledge waiting to be discovered in the world, or is it created through our engagement with it? To brush these questions off as either obvious or

fundamentally unanswerable is to miss the forest for the trees. Not only can these questions be approached with rigor, but the answers we arrive at *matter* for how we understand ourselves and our world. With the anchoring insights of *world disclosure* and *embodiment* to light our way - highlighting how our mind, body, and environment collaborate to *construct* a lived reality - we begin our ascent.

Our first steps lead us to explore the relationship between *concepts* and *knowledge*. Here we encounter a deeply embedded assumption within Western thought, which contends that knowledge is primarily about holding *justified, true beliefs*. Instead, we'll flip this conventional wisdom on its head, revealing how even our most carefully reasoned beliefs rest upon a background of *nonconceptual knowledge* that's absolutely indispensable for daily life.

Here we encounter our second 'Provisional Truth', concerning how we use *knowledge* to engage with the world. Its premise is that we do so primarily through *Situated Coping*, and only secondarily through *concepts*. What **Situated Coping** refers to is a flexible, nonconceptually guided form of *awareness* that's essential for navigating daily life. The orienting metaphor that we'll be using to illustrate this contention involves *driving*. In essence, Situated Coping is our 'vehicle' for engaging with our immediate circumstances, while concepts resemble a GPS that's used for navigation.

Before we venture deeper into this territory, we should specify exactly what we mean by *conceptual* and *nonconceptual* knowledge. To that end, consider the following pages as a strategic waypoint, where we'll gather ideas and concepts to better traverse the terrain ahead.

The Dimensions Of Knowledge

As we pack our bags with essential tools for the journey ahead, we'll begin with a brief field guide to *conceptual knowledge.* What **conceptual knowledge** refers to are the categories and distinctions that we use to form generalizations for what we encounter in the world. This doesn't just apply to age-old abstractions like 'good' and 'evil', but to concrete phenomena in the everyday world as well: we know that a 'pen' refers to a category of ink filled cylindrical objects that are used for writing. And that a 'cat' refers not only to the small, domesticated animals that we keep as pets, but also to a subset of wild animals that share some specific traits in common.

The function of conceptual knowledge is to make our observations and insights *explicit* for the purposes of communication and problem solving. Because of this, conceptual knowledge is *representational;* we use concepts to 'stand in for', or *represent,* both things and experiences. Accordingly, this is how conceptual knowledge is able to serve as the basis for language. Beyond its necessity for linguistic communication, conceptual knowledge is a precondition for being able to form *beliefs* about Reality, and for deliberative modes of thinking such as reason, logic, and scientific inquiry.

So that's conceptual knowledge. The next item on our list is **nonconceptual knowledge,** which refers to forms of understanding that are not structured or processed within this framework of categories and distinctions. Being able to recognize a face, eat with a fork, tie one's shoes, catch a ball, or ride a bicycle are some examples of this from daily life. What's

important to note is that the basis of knowledge that allows us to perform these actions is *implicit*. While we can, with a bit of effort, come up with an explicit set of rules and procedures for riding a bicycle or tying shoelaces, in practice these are after-the-fact reconstructions that aren't actually present while we're performing these actions.

The basic importance of nonconceptual knowledge lies in how it allows us to navigate many types of diverse situations, without needing to rely on *rules* to guide our behavior. Consider talking to someone: we need not be *explicitly aware* that standing on the opposite side of the room is too far for a typical conversation, or that being a few inches from someone's face is far too close. In practice, we tend to automatically place ourselves at a distance from someone that's appropriate for a given social situation, without having to *think* about it at all.

In fact, allowing these nonconceptual coping mechanisms to seep into our explicit awareness can actually disrupt their ability to function properly. Approaching conversations with too much overt awareness about how we 'should' be behaving at every given moment can make social interactions exhausting, as anyone who's struggled with social anxiety can attest to. When our nonconceptual coping is functioning as it should, the situation seems to *draw the appropriate behavior* out of us, in such a seamless way that it's ordinarily invisible to us.

Which brings us to the last of our preparations: Situated Coping, which refers to a nonconceptually grounded *form of awareness* that's indispensable for daily life. Its basic purpose is to allow us to engage with our immediate circumstances in an involved and intuitive way. The type of engagement that it facilitates is **situated** in the sense that it's always tied to the particulars of a

situation, such as riding a bicycle or having a conversation. And it's a form of **coping** in the sense that it's a dynamic, flexible *response* to the demands of these situations. Hence, *Situated Coping*.

Before going further, we should note that Situated Coping is *not* mindless, zombie-like behavior. It instead refers to an inherent *flexibility* that we bring to activities we engage in, which is highly responsive to the ebb and flow of our immediate circumstances. This flexibility becomes particularly evident when we encounter difficulties that disrupt our Situated Coping. For instance, we may find that a familiar tool isn't functioning as expected. Or that an object we're attempting to pick up is much heavier than anticipated. In these instances, the adaptability of Situated Coping is showcased by how we remain fully capable of transitioning into conceptually guided problem solving if our coping mechanisms are disrupted. It's precisely this high degree of applicability to the varied circumstances of everyday life that makes Situated Coping indispensable. Through everyday Situated Coping, we form a basis of *familiarity with the world* that serves as our foundation for conceptual knowledge.

WIth these vital concepts in our explorer's kit - conceptual knowledge, nonconceptual knowledge, and Situated Coping - we're ready to grapple with the questions we'll be exploring. Up ahead lies our *driving* metaphor, which will help us navigate the epistemology we're constructing.

Driving As A Metaphor For Situated Coping

Reflect upon the last time you were behind the wheel of a car. When *driving*, the bulk of our decision making is focused on controlling our vehicle, monitoring the road, and responding to the ebb and flow of traffic. While a GPS can assist us in this activity, what's important for our present purposes is that its role is *supplementary.* Without access to a vehicle (or a good pair of legs), a GPS on its own won't get us to our destination - regardless of how sophisticated our particular GPS is.

Which is *not* to say that the navigational assistance provided by a GPS is *unimportant,* as there are plenty of scenarios where the planning and problem solving capabilities of a GPS can be indispensable. Consider how readily we turn to its guidance when lost in an unfamiliar city, or when plotting out a long distance road trip. The flexibility it provides is especially appreciated if we happen to encounter an unexpected obstacle on our commute, such as road closure or traffic accident, that sends us scrambling for an alternate route towards our destination.

Moreover, the extent to which we rely on a GPS isn't fixed, but will vary according to where we're heading and what we encounter along the way. If our drive is going smoothly and it's a commute that we're familiar with, our GPS recedes into the background of our awareness; there if we need it, and easily ignored if we don't. Additionally, many types of commutes are so routine and familiar to us that our GPS isn't used at all.

Extrapolating this metaphor to epistemology illuminates some surprising parallels between *driving* and *knowledge*. Just as an awareness of our vehicle and its surroundings is foundational for driving, our Situated Coping with everyday practices and activities is foundational for knowledge. Much like how a GPS helps us find our way when we encounter obstacles that disrupt our commute, *conceptual knowledge* assists us when we encounter novel situations that disrupt our Situated Coping. Just as a GPS recedes from awareness during a familiar commute that's going smoothly, detached, theoretical understanding fades into the background during unhindered engagement with familiar activities.

Crucially, it was emphasized that a GPS can't get us to our destination without access to a means of transportation. Likewise, conceptual knowledge can't guide our understanding without a *background of familiarity* with the world - largely attained through Situated Coping. Concepts, while essential to how we communicate and problem-solve, only take on meaning for us against a backdrop of *pre-conceptual familiarity* with the world. We attain this familiarity through everyday practices and activities. For instance, our interactions with streets and roads is what enables us to intuitively connect the display of our GPS with streets and roads in our physical environment. So when it's mentioned that we engage with something *pre-conceptually,* it's to this *concerned involvement* in our everyday world that we're referring.

Precisely because this background of involvement in our everyday world is so crucial for understanding knowledge, it's worth taking some time to explore it more fully. The term that we'll be using for this background of involvement is *Being-In-The-World,* and it will be the focus of our next section.

Being-In-The-World

Back in the introduction to this book, it was mentioned that dissecting the works of academic philosophers isn't the 'point' of the guided tour we're undertaking. While that still holds true, for this topic in particular, we'll be loosening this precept just a bit, for reasons that will soon become apparent. This is because any in-depth exploration of *Being-In-The-World* can't help but be pulled towards the individual who not only coined the term, but used it as the cornerstone of a new approach to philosophy, upending 2000 years of established thinking on the subject.

That individual is the German philosopher Martin Heideggar (1889-1976), and he's probably the most important philosopher that you've never heard of. This is because his work has a reputation for being notoriously difficult, written with close to zero consideration for non-specialists. His most significant contribution to philosophy, 'Being And Time' (1927), is full of dense, technical language that can be indecipherable for non-specialists. Indeed, anyone who's poured time and effort into deciphering his writing might describe the experience as akin to learning a second language! Needless to say, delving into the intricacies of obtuse academic texts isn't our focus, so we'll confine ourselves to the aspect of his work that's most directly relevant for our purposes: *Being-In-The-World*.

In our previous chapter we defined 'Being' as *a form of understanding*. More specifically, it's our most basic and primordial way of understanding people, places, and things *as* people, places, and things. It's how we understand a cup *as* a cup, or a chair *as* a chair, in an immediate and intuitive way.

When we say that something *is* a particular type of thing, we're referring to its *being.*

What **Being-In-The-World** refers to, then, is the type of 'being' that people have, which is characterized by our *embeddedness within the world.* At its core, it's a recognition that our *concernful involvement* with the world is central to *who* and *what* we are. It's a way of thinking about ourselves which emphasizes that our *interconnectedness* to people, places, things, and culture is fundamental to how we experience and comprehend Reality. In conjunction with this, the expression also points to the basic conditions from which we attain the *background of familiarity with the world* that all other forms of knowledge depend upon. For our present purposes, it's this latter dimension of *Being-In-The-World* that we're primarily interested in, because it's directly related to the role and function of Situated Coping.

The hyphenation of *Being-In-The-World*, which may feel a bit awkward for someone unused to philosophical neologisms, is there for a very good reason. A **neologism** refers to a newly coined term or expression created to fulfill a specific need, that's yet to be widely adopted into mainstream language. For the neologism *Being-In-The-World*, the hyphens are meant to express that 'being' (more specifically the type of 'being' that *people* have) and 'the world' are to be understood as a single, unified concept.

The crux of *Being-In-The-World,* then, is that we can't understand the human condition in isolation from our concernful dealings with the everyday world, as the two are fundamentally inseparable. The basic reason for this is that our absorption into a world of people, places, things, and culture forms the *context* for the rest of our existence. It's the foundation upon which we

construct an identity, and come to ask questions about ourselves and our world. Another way of stating this point is that *Being-In-The-World* is the basis for our *personhood;* it's what makes 'a person' different from other types of entities, such as a rock or a computer or a tree. An alternate term that could be used for this 'concernful involvement' with the everyday world is *Care.* With this in mind, what *Being-In-The-World* is attempting to illuminate for us is how Care is fundamental to *what Reality is for us.*

As its practical implications for *knowledge,* one's cultural understanding of *what a person is* heavily informs where the 'starting point' for knowledge is conceived to be. A pair of obvious contrasts might help illustrate this: someone who believes that we're a material arrangement of matter and energy is likely to have very different intuitions about the *origins of knowledge* than someone who contends that our true essence is housed in an immortal soul that's part of a divine order.

When Heideggar coined the expression *Being-In-The-World*, he was illuminating a core aspect of the human condition, which had escaped the notice of Western philosophers. The crucial insight is the lack of any absolute boundary between ourselves and the world, because our interconnectedness with the world is constitutive of *what we are*. Thus, any exploration into the human condition must also illuminate our embeddedness in the world, because the two are fundamentally inseparable. It's a recognition that enriches our understanding of the human condition, while having considerable overlap with Eastern wisdom traditions such as Buddhism, which have long interrogated our felt sense of a discrete Self that's separate from the world.

So that's our lightning tour of *Being-In-The-World.* By now it should be clear that knowledge involves far more than 'justified, true beliefs'. When we forget this point, and fixate only on concepts, we lose sight of the lived, experiential grounding that's essential for knowledge. The key takeaway? Knowledge pulses from the *meaning* we draw from our concernful involvement within a world that has lasting consequences for us - what Heideggar termed Care. What Being-In-The-World brings into sharp focus is how our *embeddedness within the world* is the secure anchor from which our other sensemaking frameworks - from science to art to religious belief - spring forth.

To return to our orienting metaphor of *driving,* we can think of Being-In-The-World as akin to the civilizational infrastructure that makes driving *possible*. While the components of this infrastructure encompass material necessities such as roads, gas stations, and automotive repair shops, it also includes a number of *cultural practices* as well. We can look to our shared social understanding about which side of the road to drive on, who has the right of way at an intersection, and how someone is expected to behave during a traffic stop, for some examples.

The key takeaway is that driving a car depends in innumerable ways upon this pre-existing civilizational infrastructure. In the same way, knowledge rests upon our *concernful involvement with the everyday world* - what we've been calling Being-In-The-World. And just as culture is an indispensable part of the infrastructure which supports driving, a background of *shared social practices* is similarly integral to Being-In-The-World. The importance of these practices can't be overstated; they embody a whole cultural interpretation of what it means to be human, what a material object is, and more generally what counts as 'real'. But here's the key point: this 'interpretation' isn't an explicit belief

system, so much as it's a tacit foundation for relating to people, places, things, and culture.

The verdict? Being-In-The-World is no mere philosophical abstraction. Well, it *is* a philosophical abstraction, but it points to something quite profound: the living foundation from which all knowledge springs forth. This insight sets the stage for one of philosophy's most persistent puzzles: our emotional attachment to *certainty*, which has been especially prevalent within Western thought. To that end, we'll see how the phenomenological approach that we've been constructing diverges from two key strains within epistemology: Absolutism and Relativism. As we unpack the ongoing tug-of-war between these two camps, our aim is to subsume the partial truths of both into a 'middle way' that we'll be calling 'Enactivism'.

We'll then conclude this chapter with an overview of how Enactivism is at its heart a *reconstructive* epistemology. Where the aim is to reconcile the recognition that knowledge is always tied to a *perspective*, with an acknowledgment that we can and must be able to arrive at *shared forms of understanding.*

Chasing The Certainty Dragon

'Chasing the dragon' captures one of our oldest follies - the pursuit of the unattainable, where each step towards a desired state or goal only pushes it further from our reach. Born from drug culture, it alludes to the experience of chasing an elusive high that one can never quite re-attain, due to how our bodies naturally build up tolerance through repeated use. Though coined for patterns of substance abuse, the phrase is malleable enough

to have applicability in other domains, since it captures a broader truth about the human condition.

What it points to is a tendency to chase after an elusive goal that promises to fulfill some kind of emotional need, such as safety, belonging, or contentment. Yet instead of delivering the goods, what we're left with is a tragic paradox: not only is the goal unattainable, but the pursuit itself results in negative consequences for ourselves and others. Beyond being an apt metaphor for drug use, we can see this pattern emerge in other domains such as consumerism - where no matter how much stuff we manage to acquire, it's never enough for lasting fulfillment. Or for an altogether different illustration we can look to spiritual practice, where 'chasing the dragon' can serve as a cautionary expression about emotionally clinging to mystical experiences - as trying to force such states makes them less likely to occur.

So what's the shared thread connecting 'chasing the dragon' to epistemology? The connection becomes clear when we see how absolute certainty becomes the sensemaking equivalent of 'chasing the dragon'. How so? For one, it relieves us of the emotional burden of having to question our deeply held beliefs about Reality. To cut to the heart of the matter, our most deeply held beliefs aren't held in a detached or disinterested way. Rather, there's normally a great deal of emotional investment in the sensemaking frameworks that anchors us to the world, and are often core to our identity. Needless to say, the scope of our emotional investment can make it extraordinarily difficult to scrutinize these anchors to reality - a topic we'll return to in our final chapter: *Beliefs Serve Us Best When Held Lightly.*

The rub? Our attachment to certainty comes at a steep cost, one that's ultimately unsustainable. The price to maintain our certainty is having to live in denial about aspects of Reality that clash with our intuitions. A go-to tactic is *barring the path of inquiry* - shutting ourselves off from possibilities that might turn out to be true. This not only leaves us more ignorant than we might otherwise be, but often leaves us ignorant of our ignorance.

The 17th century showdown between the Catholic Church and Galileo Galilei offers a compelling historical illustration of this dynamic. By this time, Church doctrine was still clinging to an outdated geocentric model of the solar system, which placed the Earth at the center of the cosmos. Moreover, the Church had been using its considerable political influence to *bar the path of inquiry* on the topic. Dismissing out of hand Galileo's observational evidence that the Earth orbits the sun, Church authorities went so far as to confine the intrepid scientist with house arrest and threaten him with torture if he didn't drop the matter.

For a more contemporary example of *barring the path of inquiry*, we can look at how some self-identified atheists will dismiss all matters of spirituality out of hand. It's an attitude that throws the baby out with the bathwater; conflating spiritual practices for cultivating insight with religious superstition, while dismissing any possibility of valid insights from these experiences. The origin of this blanket dismissal? A purported certainty that science alone can reveal everything there is to know about ourselves and our world - and that anything beyond the scope of scientific verification simply doesn't exist.

Looking beyond these examples to the broader themes of this chapter, we find that *certainty* is a central point of fascination for as long as people have been crafting theories of knowledge - or **epistemology**, as we've been calling it. A broader context for the role of *certainty* will be important going forward, because it will help us define the 'shape' of the Enactive *epistemology* we're constructing.

The Enactive Approach

How can we navigate between the extremes of unyielding certainty and paralyzing skepticism? One method is to chart a 'middle way' that's grounded in our lived engagement with the world. Mind you, this 'middle way' doesn't mean finding a lukewarm compromise that's halfway between these opposing sides. Rather, it involves rejecting the game entirely, and shifting to a new playing field with a fresh set of rules for thinking about certainty. Our name for this framework is **Enactivism**, and its course-correction emerges from acknowledging the active role that minds play in 'bringing forth', or *enacting,* an experiential world.

Having left the old playing field behind, Enactivism threads a course between two traditional opponents: *Absolutism* and *Relativism*. The former contending that knowledge is strictly *impersonal*; perhaps best personified by the statement that 'facts don't care about your feelings'. While the latter attests that knowledge is inherently *perspectival,* meaning that it's unavoidably interpreted through a set of individual and social circumstances.

Our decision to name this framework Enactivism is no accident - 'enact' means to 'carry out' or 'bring to fruition'. The etymology of our term hints at its core hypothesis: that knowledge is *constructed.* The key insight? Knowledge doesn't exist 'out there', as a fixed feature of some 'neutral' Reality. Nor does it emerge as a pure invention of an isolated mind. Instead, it arises at the intersection of mind, body, and environment, through a dynamic feedback loop we call *world disclosure.*

The crux of *world disclosure* is that our minds give us an experiential Reality to live in that comes *pre-arranged* in terms of our needs and capacities. Enactivism extends this insight by showing that knowledge emerges from the *relational process* between a living body-mind and its environment. Far from being passive receptors for 'external' inputs, our mind works in tandem with our living body and our environment to actively *construct* an experiential reality. The most impressive part? Most of this occurs beneath conscious awareness - our minds' considerable effort to construct an intelligible reality is largely invisible to us

And while this generative process can lead to reliable knowledge about Reality, what it can't provide is *absolute certainty*. Our knowledge remains inseparable from our lived *perspective* within Reality, and the perspectives of *living* minds are necessarily bounded by *biology*. So does this condemn us to be forever isolated within our individual perspective? Far from it! As we'll see, our shared evolutionary heritage makes possible stable forms of knowledge that are broadly applicable.

An additional aspect of *Enactivist* epistemology lies in its insistence that Absolutist and Relativist accounts are *true, but partial*. What this means is that both viewpoints contain elements of truth, but are partial in the sense that they miss the

dynamic interplay between observer and observed - how mind and world define and shape one another in a dynamic feedback loop. Armed with this insight, our Enactive approach will aim to *synthesize* aspects of these two opposing accounts, while rejecting key assumptions from both.

Enactivism rejects the shared assumption that knowledge is primarily *conceptual,* and mostly a matter of holding *beliefs*. As we've seen, this is flawed because it fails to account for how *nonconceptual* ways of knowing and being are central to everyday life. Our extended survey on the centrality of Situated Coping for everyday forms of knowing and being was an articulation of this precise point.

Another area where Enactivism parts way with both camps lies in another one of their shared blind spots: treating knowledge as *disembodied*. This oversight has direct implications for how perspectives shape knowledge; both Absolutism and Relativism miss the mark here, though for different reasons. Absolutism gets it wrong by ignoring how perspectives inevitably shape what counts as valid knowledge. While Relativism falls short by fixating on the social and cultural dimensions of knowledge, overlooking how our shared human perspective within Reality opens the door to forms of understanding that transcend individual and societal contexts.

Lastly, Enactivism shatters a final cornerstone of these opposing views: that there's an *absolute boundary* between ourselves and the world. It rejects the notion that Reality can be neatly divided into an 'external' world of objects and an 'internal' world of experience. As we'll see, this taken-for-granted divide dissolves under closer scrutiny.

This perceived boundary typically masks a deeper assumption: that one of these domains - internal or external - is more ‘real’ than the other. We can see this in materialist perspectives that try to ‘explain away’ consciousness, arguing that minds are nothing more than an arrangement of matter and energy. On the flip side of the coin, certain spiritual perspectives contend that physical reality is a mere illusion created by our minds. Both instances are illustrative of *reductionism* - trying to ‘explain away’ a particular phenomena by conjecturing that it’s in fact a *property* of something else.

As we’ll see, one of Enactivism’s core aims is to sidestep this tug-of-war over what’s ultimately ‘real’, in favor of a pragmatic perspective grounded in everyday experience. A guiding insight of this pragmatism could be summed up as: *no unmediated access to Reality* - that our embodied perspective within Reality is what’s ultimately ‘real’ for us. Precisely because it’s only *through* this perspective that we have access to a world of people, place, and things, theorizing about what Reality ultimately 'is' is beside the point - when what we actually care about is what Reality is *for us.*

This shift in focus opens a more fruitful path forward. By questioning the fixed boundary between ourselves and the world, we can explore our interaction with these domains without falling into the trap of *reductionism*. Enactivism's key insight? The divide between 'self' and 'world' is *mentally constructed* - indeed, the *world itself* is indispensable to what minds are.

With this groundwork in place, it becomes clear why Enactivism offers a compelling 'middle way' for thinking about certainty - without succumbing to a half-hearted compromise between two played-out extremes. Yet instead of a stubborn refusal to find

anything of value in these camps, Enactivism reveals how their partial insights can be synthesized into a fresh perspective for reflecting upon our lived experience. The cornerstone of this synthesis? It lies in recognizing that while knowledge is perspectival, perspectives aren't boundless - they're grounded in a shared biological and evolutionary context. As a practical matter, there are fundamentals that human beings can and must be able to agree upon to have functional societies. In every society, people fall in love, have children, get sick, grow old, and die. While the meanings we attach to these experiences vary across cultures, their universality creates common ground for shared understanding.

So that's the gist of the *Enactive* approach. What's to follow is a brief followup on the *Absolutist* and *Relativist* viewpoints which *Enactivism* offers itself as an alternative to. Our aim is to unearth the basic assumptions behind both viewpoints, while excavating the *partial truths* contained within. Lastly, we'll tie this all together with a look at the *meaning crisis* that's unfolding within the West, why this crisis calls for *reconstructive* epistemology, and how Enactivism can play a small but promising part in bridging these divides.

Pining For Absolute Foundations

While Enactivism finds its bearings amidst our lived perspective within Reality, Absolutism ascends the masthead in search of an elusive 'view from nowhere' - yearning for a set of *absolute foundations* upon which our knowledge about Reality can safely rest. Just as Ahab became consumed by his obsessive hunt for Moby Dick, philosophers, scientists, and theologians have long

pursued their own white whale: *absolute certainty* that can serve as a stable bedrock for sensemaking. Speculation on the basis for this certainty has included an all-knowing and all-powerful God, the surety of our own conscious experience, and a self-contained material reality governed by physical laws, to list just a few of the more prominent contenders.

Uniting these varied approaches is an unquestioned faith that all knowledge must spring from some fixed *ground*. What a 'ground' refers to is a foundational assumption that's not contingent upon anything else. For instance, scientific materialists plant their flag in self-contained physical Reality that's not dependent upon any divine tinkering. Monotheists make a parallel move, casting God as the eternal wellspring for life, the universe, and everything. And then there's the consciousness-first folks, who insist that the physical world is a parlor trick of our minds.

What binds all of these diverse perspectives together is a shared presupposition that there's a monolithic *something* (such as matter and energy, a divine creator, or consciousness) that serves as the Source, or *ultimate ground,* for all that exists. Just as the ground beneath a building determines the shape of structure above, the *ground* of an epistemology shapes the metaphysical tales we spin about Reality. And just as surely as buildings arise from a foundation, our convictions about what counts as valid knowledge arise from our intuitions about what's ultimately 'real'.

When we encounter claims that violate these intuitions, we're generally very quick to dismiss them out-of-hand - we chalk it off as fantasy or delusion, and that's where the consideration ends. It's why we don't get alarmed when a small child tells us that there's a monster under their bed, yet we react with an

appropriate level of concern if they report a stranger lurking in our yard at night.

The basic takeaway is that we all use Absolutism in our lives. The ‘sniff test’ it facilitates serves a very important purpose, providing us with an accessible waste bin for discarding nonsense. Consider just how much useless, nonsensical information you come across in a typical day - and how much worse this problem has gotten in the digital era. Much like Borges' Library of Babel - that short story of the impossible library containing every possible text, most of which is nonsensical gibberish - we wade amidst an unending stream of misinformation, conspiracism, and bullshit that’s gunking up our sensemaking machinery faster than we can clean it. Without Absolutism, finding any semblance of coherence in this sea of noise would be a herculean task.

So that’s the everyday necessity of Absolutism, but what of its limitations? Like a finicky shower knob that’s maddeningly inconsistent as to whether the water it releases is ice-cold or scaldingly hot, Absolutism is notoriously difficult to fine tune. If the miscalibration gets bad enough, the consequences can be catastrophic - the historical record is rife with examples, from the belief in a quick victory and subsequent sunk-cost fallacy that led millions to their deaths in World War 1 to the blind faith in markets that created the Great Depression. So how do we check if what we’re certain about, and what we dismiss out-of-hand, is reasonably well calibrated? For that, we turn to Absolutism’s antithesis: Relativism.

The Prudence And Pitfalls Of Relativism

Where Absolutism hitches its epistemology to bedrock certainties, Relativism reveals how knowledge rests upon the shifting sands of perspective. Those fixed and enduring truths that Absolutism pines for are for Relativism hunks of fool's gold, carved out from a labyrinth of competing stories. Instead of casting its anchor to the seabed of surety, Relativism recognizes that truth is murky, and our choice of lens determines what's revealed to us. For Relativist epistemology, knowledge takes different shapes from different vantage points. Moreover, knowledge isn't a fixed feature of the world that's waiting to be discovered like buried treasure - it's something we actively craft through our individual, social, and cultural lenses. These then are Relativism's navigational tools: the lens of *perspective* and the map of *context*.

Developing alongside advances within other academic disciplines, such as linguistics and sociology, Relativism reveals a crucial insight: every piece of knowledge comes to us through an *interpretative* lens. When presented with the assertion that 'facts don't care about your feelings', Relativism reminds us that 'there's no such thing as an *uninterpreted fact*'. Which is to say, facts always *mean* something to someone. Moreover, the lenses we look at the world through pre-determine which types of *facts* are available to us - and what stories those facts tell. While a racist won't have any difficulty in dredging up facts for why an out-group deserves their hatred, a humanist will see the same data as evidence of systemic inequalities. With such radically different readings of the same 'facts', Relativism shatters the comforting myth of 'neutral' knowledge.

Beyond coming to different interpretations over what facts mean, there's an additional question for us to consider: which facts are *relevant* for a given situation? Here's where Relativism delivers a gut punch: 'just the facts, please' is a convenient story divorced from the messy epistemological reality. And here's the real kicker: there's no objective formula that can tell us which facts are relevant for any given situation. In practice, individuals and groups will choose to emphasize certain facts over others based on their motivations, life experiences, and cultural background. Moreover, determinations of *relevance* are coupled to what we care about within a given situation - our values decide which facts are given a seat at the table. Crucially, this isn't a 'flaw' of our reasoning that can be excised through a strict adherence to 'objectivity'. It's an inescapable feature of our existential situation, as finite beings that experience Reality from 'somewhere' rather than 'everywhere'.

Armed with insights of perspective and context, Relativism revealed an uncomfortable truth about the role of *coercive power structures* in dictating what counts as 'knowledge'. This led the way for new forms of social critique, exposing the incestuous relationship between 'knowledge' and *Grand Narratives*. While *narratives* are a sensemaking tool that's as old as human culture, Grand Narratives differ from our everyday yarns due to their relationship with *power*. A Grand Narrative is a story big enough to swallow the world, offering a broad and encompassing explanation for an observed state of affairs. Tellingly, it's no accident that these tales usually justify the existing social order - or pitch its replacement.

For a textbook case of how Grand Narratives serve power hierarchies, consider the 'white man's burden' narrative used to

prop up European colonialism. Its thrust was that white Europeans had a right and duty to 'civilize' (i.e., colonize) other regions of the world, due to Europe's self-appointed role as stewards of civilization against 'barbarian' cultures. Far from backwater bigotry that was eschewed by respectable people, this narrative found eager champions among Europe's most well educated and esteemed individuals. Moreover, it's a notion that found support within scientific discourse of the time, bolstering its credibility among those who preferred their bigotry to be peer-reviewed.

And while it's easy for us to ridicule these outdated narratives, their lessons echo uncomfortably into the present. The cautionary tale they tell is that present-day sensemaking inevitably reflects our own social, cultural, and personal circumstances. It can be sobering to confront the fact that this process is largely invisible to us, due to our enmeshment in the cultural waters that inform our beliefs. So when we pass judgment on the Grand Narratives of the past, it would be well to remember that we're doing so with the benefit of hindsight. That said, the point of this wake-up call isn't to whitewash these narratives - it's a call to approach the self-evident truths of our own era with a healthy *informed skepticism* (a topic we'll return to in our final chapter: Beliefs Serve Us Best When Held Lightly).

So that's the 'prudence' of Relativist epistemology. Where do its 'pitfalls' lie? As we explore these pitfalls, we'll begin to get a better sense of where Relativism meets - and parts ways - with our Enactivist framework. The task before us is to *distinguish* and *bridge*: this involves identifying Relativism's *partial truths,* while being mindful of its inherent limitations. Phrased differently, we're attempting to 'transcend and include' the partial

truths of Relativism, just as we did for Absolutism (tip of the hat to the philosopher Ken Wilber for this useful framing).

An attentive reader may have noticed some common ground between Relativism and Enactivism - particularly their shared focus on how *knowledge* is constricted, and on the impracticality of *absolute truth*. That said, the overlap between these two epistemologies shouldn't be overstated. As we'll see, Relativism stumbles when it's pushed beyond its useful insights towards a complete theory of knowledge.

Relativism's fatal flaw? Like a defense attorney who unintentionally incriminates their client, Relativism is inherently self-undermining. And how does Relativism stumble into this trap? It does so through one of two paths, which ultimately lead to the same destination. Down the first path, Relativism takes a page from Absolutism's own playbook, crowning itself the final arbiter of knowledge. Thus does Relativism become wedded to the very thing it sets out to dethrone - absolute certainty. Down the second path, Relativism refuses the crown and becomes merely one valid perspective among others. Thus, the trap snaps shut: if Relativism is correct, then it's no more or less valid than the Absolutism that it critiques.

While this might look like humility, in actuality no one adheres to an epistemology without an implicit belief that it's more valid than what it's critiquing (otherwise, why embrace Relativism over some other viewpoint)? Another term for this is a **Performative Contradiction**. It's an inconsistency that's unaddressed because it's fundamentally unanswerable - and thus inconvenient to advocates for that viewpoint.

Beyond this Performative Contradiction, Relativism's second major stumbling block arises from its impracticality for real-world decision making. Relativism leaves us stranded on *which perspectives* should guide our decisions and behavior. Providing actionable guidance on how to discern what's likely to be *true* is where the rubber hits the road for epistemology. Precisely because any attempt to assess the comparative value of different societal and cultural viewpoints is anathema to Relativism, this severely limits its usefulness for guiding our decisions in the real world. An important aspect of living in the real world means being confronted by decisions that are informed by incommensurable viewpoints. As such, we can't always reach a compromise that 'splits the difference', nor should we work from the assumption that every perspective should be given a seat at the table - inviting Nazis to participate in public discourse is to miss that their entire agenda operates in bad faith. In short, there's no shortage of bad actors ready to gleefully weaponize Relativism's naivety that 'all views are valid'; when the ability to call out lies is kneecapped, demagogues flourish.

Enter Relativism's final stumbling block: misapplications of it poison the well of productive discourse. The problem is simple: Relativist epistemology is inherently *deconstructive*. Its modus operandi is to 'debunk' existing attitudes and beliefs; brilliant at demolishing existing beliefs but useless at building bridges. While taking a sledgehammer to harmful ideas is crucial, Relativism leaves us bereft of the scaffolding to rebuild after. Demolition without reconstruction leaves us stranded in the rubble.

When left unchecked, Relativism can toxify into narcissistic echo chambers, where individuals and groups insist upon their own

‘truths’ that are completely detached from Reality. Social media has only amplified this poison into a plague, corroding the shared reality that sustains our democratic institutions.

So where does this leave us? While destruction and creation are on some level two sides of the same coin, tearing down ideas and beliefs that aren’t working anymore on its own isn’t enough. Nature abhors a vacuum, and in the absence of better alternatives, darker forces await their chance to fill the void. We needn’t look far to find a host of candidates circling overhead, eager to feed on alienation and despair. Conspiracism is one prominent example that positively thrives in this wasteland, ready to seduce the lost with its poisonous certainties.

Warding off these circling specters requires more than Relativism's sledgehammers - we require tools for rebuilding meaning. Enter Enactivism: a *reconstructive* epistemology that meets this urgent need in Western thought.

Conclusion : The Need For Reconstructive Epistemology

To appreciate the need for *reconstructive epistemology,* we can ask what happens when a culture’s foundational narratives become maladaptive. When institutions calcify against change, their legitimizing stories erode, leaving a society unmoored. Without a more expansive and compassionate story to take its place, the resulting abyss breeds monsters - darker narratives that feed on alienation, fear, and resentment. Weaponized nostalgia for a lost world has bred some of the darkest chapters

in human history, from the Ku Klux Klan to Hitler's Germany to contemporary Christian Nationalism.

What's crucial to understand here is that these constructed narratives aren't just stories - they're the invisible scaffolding that holds civilization together, transforming millions of strangers into a functional society through shared forms of meaning and identity. To understand why we need such narratives at all, let's trace their emergence in human social evolution. These binding narratives became essential once populations grew beyond what hunter-gatherer bonds could sustain. Just as bees are adapted for a hive and wolves for a pack, human sociality evolved within a tribe - where everyone knows everyone else through face-to-face interactions and extended kinship. While living among a sea of strangers is something we've come to take for-granted, a 'tribe' of millions would have been an unthinkable contradiction for our ancestors. The evolutionary fingerprint of our tribal origins persists in modern humans - we can only maintain meaningful face-to-face relationships with about 150 individuals, a limit known as *Dunbar's number*.

To bridge this gap, we developed *social-technologies* that would allow interactions with strangers to become a routine part of life. Chief among these was the creation of *constructed social identities* - shared stories that sustain social trust without requiring face-to-face bonds or kinship ties. These narratives aren't merely cultural artifacts - they're the foundation that makes modern society possible. Human rights, democracy, money, and science are *constructed narratives* that built the modern world. If people stopped believing in them they would cease to exist, yet calling them 'imaginary' is to miss how they shape our material reality.

Despite their appearance of stability within a human life, these constructed narratives inevitably break down - through internal contradictions, mounting external pressures, or both. We'll call this process **Construct Collapse**. While civilizations can and do collapse entirely, our focus here is on societies that endure a narrative breakdown. In these cases, the void will be filled, one way or another.

Construct Collapse itself isn't positive or negative - its impact depends entirely on what replaces the fallen narrative. Very few people today would openly argue that the collapse of narratives that supported *slavery* was a bad thing. On the flip side, totalitarian ideologies which exploit Construct Collapse during states of crisis demonstrate its inherent dangers - as Nazism's rise from the trauma of World War 1 and the austerity of the Great Depression make painfully clear. It's a lesson we may have to live through again, as today's democracies find themselves under the assault of authoritarianism from within and without.

Between these extremes of clear benefit and catastrophic harm, Construct Collapse typically creates more ambiguous outcomes - addressing existing problems while introducing unforeseen consequences. Consider Friedrich Nietzsche's famous declaration that 'God is dead, and we have killed him.' He was describing the displacement of organized religion as the foundation of meaning in Western life. Writing amidst the rapid changes of 19th century Europe, he foresaw how traditional cultural narratives would become increasingly untenable, swept aside by the forces of modernity - science, industrialization, and secular values.

His warning was that existential needs for meaning and purpose aren't so easily excised. And that in lieu of suitable replacements,

cynicism, despair, and empty consumerism would rush to fill the void. While his proposed solution - moving 'beyond good and evil' to pursue individual will regardless of ethical consequences - was deeply toxic, Nietzsche correctly diagnosed the looming crisis.

In our own era, we find ourselves amid what cognitive scientist John Vervaeke has termed the 'Meaning Crisis.' Its symptoms are evident in the widespread adoption of conspiracy theories, political extremism, and bullshit in public discourse. The cumulative effect has been nothing short of disastrous for the civil society that sustains democracy. Social media platforms, whose business models push user engagement through divisive, inflammatory content, have only accelerated this decline. While these may seem like recent problems, they're an intensification of profit-driven media's long history of exploiting social fragmentation for private gain.

Amongst this rising polarization, we're facing an unprecedented mental health crisis in the West - millions are feeling alienated, lonely, and displaced. In the United States, 'deaths of despair' - through suicide and substance abuse - have driven a decline in life expectancy. An unfolding ecological crisis, poised to reshape human civilization over the upcoming century, is deepening this collective trauma. A global resurgence in fascism has been ruthlessly exploiting this trauma, promising to make our societies 'great' again while worsening the very crises it feeds upon. This cumulative upheaval weighs heaviest on young people, where profound anxiety and despair about the world they'll be inheriting is commonplace (here in the United States, a shared meme among Millenials and Gen Z is that our retirement plan is to die from climate change before old age). Gen Alpha, our youngest generation, has never known a world before today's

hyper-polarized dysfunction. Amid skyrocketing inequality, basic milestones of adult life - buying a home, starting a family, saving for retirement - have become impossible dreams for most.

Yet economic and political dysfunction flows downstream from culture. While these material factors are very real, we're also facing something deeper: an *epistemological crisis* in the West, with different segments of society no longer inhabiting the same Reality. Beyond different interpretations over basic facts that we can more or less agree upon, reaching a foundational consensus for productive disagreements has become nearly impossible. The rise of artificial intelligence is poised to deepen these epistemic rifts even further. These developments poison our ability to cultivate shared understanding. As this crisis deepens, our social dysfunction will only worsen - making *epistemological literacy* more important now than ever before.

Of course, no epistemology - Enactivism included - can be a silver bullet for this crisis. What perspectives like this *can* offer is greater self awareness around our sensemaking narratives. Enactivism is *reconstructive* because it acknowledges that constructed narratives play an essential role in meeting our individual and collective needs, while recognizing that some constructions serve us better than others. And the path forward lies in constructing narratives that are *flexible*, *compassionate*, and *inclusive*.

In sum: reconstructive epistemology isn't about returning to the 'good old days' of a romanticized past. The framework we're proposing offers no quick-fixes for complex problems. Nor is it meant to be a dogmatic, one-size-fits-all approach. Rather, Enactivism is meant to exist in dialogue with other

epistemological perspectives - not because all views are *equally valid*, but because the perspective if offers is *true but partial.*

Chapter Summary

- **Epistemology** is the study of how we come to know things and of what constitutes valid knowledge.

- **Conceptual Knowledge** refers to the categories and distinctions that we use to form generalizations about what we encounter in the world. Its function is to make our insights and observations *explicit* for the purposes of problem solving and communication. Conceptual knowledge is *representational,* meaning that concepts 'stand in for' things and experiences.

- **Nonconceptual Knowledge** refers to forms of understanding that aren't structured within this framework of categories and distinctions. Being able to recognize a face and tie one's shoes are some examples of this from daily life. Its importance is that it allows us to intuitively navigate a diversity of situations, without having to rely on rules to guide our behavior.

- **Situated Coping** is a flexible, nonconceptually guided form of awareness that's essential for daily life, allowing us to engage with our immediate circumstances in an involved and intuitive way. It refers to an inherent *flexibility* that we bring to situations and activities, evidenced by our ability to transition to a more detached, theoretical mindset if we encounter unexpected

difficulties that disrupt our coping.

- **Being-In-The-World** refers to our embeddedness within the world, alongside our *concernful involvement* with everyday practices and activities. Its basic assertion is that our *interconnectedness* to people, places, things, and culture is fundamental to *what* Reality is for us. It points to the *background of familiarity with the world* that all other knowledge depends upon.

- We can think of Situated Coping as our 'vehicle' for engaging with our immediate circumstances, while concepts resemble a GPS that's used for navigation. With Being-In-The-World as akin to the civilization infrastructure upon which driving depends.

- Grounding epistemological assertions in *certainty* is analogous to 'chasing the dragon', since this practice tends to be sustained by living in denial of aspects of Reality that clash with one's foundational assumptions.

- **Absolutist** epistemology tries to base its claims off from fixed and enduring truths, which we can be absolutely certain of. It aims to use this purported certainty as a stable bedrock to investigate Reality from.

- **Relativist** epistemology is underpinned by skepticism that knowledge can be grounded in absolute (i.e., fixed and eternal) truths. Its contention is that knowledge is unavoidably *interpretative*. In essence, the meaning of things isn't fixed, but is instead derived from a person's motivations, life experiences, and cultural background.

- **Enactivism** refers to an epistemological approach which contends that minds 'enact', or 'bring forth', an experiential world in accordance with our living bodies and our environment. It aims to be a ‘middle way’ that’s in dialogue with both Absolute and Relative accounts of knowledge, while rejecting some key assumptions of both.

- Our larger aim with Enactivism is to cultivate *Reconstructive* ways of thinking about epistemology. This approach acknowledges the necessity of narratives, while recognizing that there are better and worse ways to construct them. The basic contention is that we should strive for more self-awareness around the narratives we use to make sense of Reality. Rather than trying to do away with such narratives entirely, we’d be better off with ones that are more flexible, inclusive, and compassionate.

CATEGORIES ARE ALWAYS CONTEXTUAL

Orienting Metaphor :

Categories are like handheld models that help us grasp aspects of Reality that are relevant to us. Just as we wouldn't confuse a model airplane with an actual aircraft, we shouldn't confuse our constructed categories for Reality itself.

The Model Is Not The Manifestation

Throughout our exploratory journey we've been assembling a tentative framework for understanding knowledge, grounded in the importance of the living body to what minds are and how thought works. Rather than getting bogged down in a thicket of abstract theorizing disconnected from everyday experience, our aim has been to elucidate our *concernful involvement* with the day-to-day world.

From this foundation, we proceeded to highlight the centrality of *nonconceptual knowledge* for navigating daily life. We suggested that *concepts* depend upon a background of familiarity with the world that's nonconceptual, attained through everyday practices and activities. Lastly, we analyzed how this grounding within Reality, termed Being-In-The-World, is foundational for conceptual thinking - including scientific understanding, logical reasoning, and beliefs.

Taken together, the *epistemology,* or theory of knowledge, we've been constructing is called 'Enactivism' - named for its overarching premise that minds actively bring forth, or 'enact', a lived Reality. A key facet of this framework is that *the world itself* is central to *who and what* we are, inseparable from our 'being' - moreover, there's no definitive boundary that delineates where 'I' end and 'the world' begins.

This lack of an *absolute boundary* between 'self' and 'world' may sound like a highly abstract or even spiritual point. However, it has direct applicability for the epistemological ground we'll be covering in this chapter. The next stop on our exploratory journey brings us to *categories*, and their influence on our perceptions of the everyday world. Our third 'Provisional Truth' is that *categories are always contextual.* The orienting metaphor that will clue us into its meaning is a *handheld model*, like a model airplane. The gist of the metaphor is that categories are like handheld models, helping us grasp aspects of Reality that are relevant for us. Just as we wouldn't confuse a model airplane on our desk for an actual aircraft, we shouldn't conflate our constructed categories for Reality itself.

The key takeaway here is that *the model is not the manifestation* - meaning that models are not a *replacement* for what they represent. A model vehicle can't be used as transportation, nor is plastic fruit edible. Moreover, models are not *replications* of their real-world counterparts - even a highly detailed model can't hope to replicate the millions of mechanical parts within a Boeing 747. So if a model airplane isn't a replacement for, or a replication of, an actual aircraft, then what is it? In essence, it's a collection of curated *surface details* - such as rigid wings, a cockpit, and an engine - which combine to form a *unified impression* of a more complex whole. This intuitive connection between a model plane

and an actual aircraft is arrived at through *imaginative projection* that's derived from our embodied experiences within an everyday world that contains airplanes.

So that's the 'model' side of our orienting metaphor - now let's extrapolate it to our *conceptual categories*. The basic parallel is that just as a model plane is not an actual aircraft, our constructed categories are not objective features of Reality. Both model airplanes and mental categories create an intuitive impression of a more complex whole, by emphasizing certain of its *selective features.* Crucially, these selective features are not arbitrary - they catch our attention because they are *relevant to us* for one reason or another.

In everyday situations, we ordinarily have little trouble discerning what's relevant for us - when we're hungry we seek food, when we cut our finger we apply a bandage. This ease, however, obscures that there are no *universal principles* for relevance determination. It's a bit like that old story of the world resting on a turtle; when asked what the turtle stands on, the answer is 'another turtle', and so on, as it's 'turtles all the way down.' Similarly, any attempt to create universal rules of relevance would require yet another set of rules to apply *those* rules, and so on, ad-infinitum.

The root of this problem is that relevance itself is fundamentally *contextual* - what matters to us in one situation may be inconsequential in another. And even within a shared situation, individuals may have markedly different intuitions about what's relevant, stemming from their particular needs, goals, and capacities. Importantly, the context driven nature of relevance doesn't just affect our moment-to-moment decisions - it's also central to how we use categories to understand and reason

about the world. Precisely because *relevance* is at the heart of *categorization,* and relevance changes depending on context - *context is king* for our conceptual categories.

Context Is King For Categorization

What a **context** refers to is the background situation and circumstances that shape our interpretation of something. Consider spoken language, for instance - and the degree to which tone, body language, and personal relationships contribute to the meaning of a verbal conversation. Although we readily recognize context's influence on speech, we often fail to acknowledge its foundational importance for how we use *categories* to make sense of the world.

Notably, this contextual influence doesn't just apply to elusive categories like 'truth' and 'beauty', whose meanings have been discussed and debated for centuries. It extends to concrete phenomena in the everyday world as well. This includes material objects like tables and chairs, sensory properties like color and texture, and even spatiotemporal fundamentals like space and time. Our intuitions tell us that these everyday categories correspond to 'objective' categories that exist in nature; yet this is a mistaken assumption. What we find is that a more complex and fascinating truth awaits us, if we can let go of this rigid insistence that our categories are mirrors of nature

The roots of this deceptive intuition arise from a fundamental misunderstanding about the formation and function of the categories we use. Conceptual categories, even for seemingly concrete things, aren't a straightforward retrieval of pre-existing

distinctions that are 'out there' in the world. Instead, they are more like *mental frameworks* that help us make sense of our embodied experience. These mental frameworks, or *schemas,* are inherently tailored to our needs, capacities, and purposes as human beings. In this sense, categories are unavoidably **anthropocentric** - reflecting our uniquely human perspective within Reality. A **schema**, simply put, is a pattern for organizing and interpreting information within a given domain. Categories, then, can be understood as *anthropocentric schemas,* which are unavoidably tied to our embodied experience within the world.

This understanding of categories as *anthropocentric schemas* reveals an important insight into their formation and structure. At their core, categories are *functional* rather than *objective.* Their purpose is to help us make *predictive generalizations* about what we encounter within the world, which is integral to our ability to *reason*. **Reason**, then, is our capacity to manipulate and extend these 'predictive generalizations' - using them to draw inferences, predict patterns, and reflect upon our embodied experience.

A closer look at the formation and structure of *categories* also invites us to reexamine many of our intuitions about Reason - chief among them, the prevailing assumption that Reason is primarily a detached, intellectual activity. This traditional view presupposes that reason is inherently **transcendental**, meaning that it literally *transcends* our human perspective. Reason, in this view, is an inherent feature of Reality, independent of any thinking beings. Going forward, we'll refer to this perspective as *Transcendental Reason.* When we use the word 'Reason' with a capital R, it's to this transcendental conception of Reason that we're referring. The alternative perspective we'll be exploring aims to show how human reason arises from our embodied, everyday experience - and that reasoning relies significantly upon

emotion, imagination, and metaphor. In contrast to capital 'R' Reason, when we use the word with a lowercase 'r', it's to this embodied, human reason that we refer.

In connection with this alternate account of reason, we'll also challenge prevailing assumptions around 'Objectivity'. These notions often presuppose that there's a single, correct view of Reality that transcends our human perspective - in essence, a "Transcendental Objectivity'. In contrast to the transcendental perspective, what we'll be articulating is a fundamentally 'human objectivity'. Where the focus is on leveraging a *shared human context* to arrive at common forms of understanding, without resorting to the unrealistic idea that Reality can be understood from a 'neutral', perspective-free viewpoint. As with our account of 'Reason' and 'reason', we'll use a capital 'O' when we're referring to Transcendental Objectivity, and a lowercase 'o' for human objectivity.

So why draw attention to these distinctions? Because being bound within a context and a perspective isn't a 'flaw' of human reasoning - it's an essential feature. The epistemological ramifications of this observation are huge. In particular, they're a 'shot across the bow' to notions that we can have absolute or universal knowledge. Moreover, because this perspective runs against the grain of our everyday intuitions, it also opens the door to a number of misconceptions. So before proceeding in our investigation, let's address these potential obstacles right out of the gate.

Why Our Limitations Matter

The first of these potential pitfalls involves a misconstrual of what this 'shot across the bow' to *absolute knowledge* actually entails. The assertion that conceptual categories aren't a retrieval of mind-independent distinctions that are 'out there' in the world may seem strange. This strangeness is understandable. We live in a scientific culture that's long since dethroned mankind from the center of the universe, and the suggestion that categories aren't external to us may seem as if it flies in the face of established knowledge. Naturally, this rejection of mind-independent categories raises some questions, chief among them: doesn't it resurrect the outdated idea that we occupy a privileged position at the center of Reality? After all, our everyday categories certainly *seem* to correspond to external, mind-independent distinctions.

Before we tackle these concerns, let's introduce some shorthand that will be helpful going forward. We'll use 'Transcendental Categories' to refer to the tacit assumption that conceptual categories are fixed features of Reality which *transcend* our human perspective. By contrast, recall that **phenomenology** is a methodology for scrutinizing how the world shows up for us in the directness of our lived experience. 'Phenomenological Categories', then, refers to the idea that categories are *anthropocentric schemas* that arise from our embodied interactions with the world. With this shorthand in mind, let's return to the issues that are raised by this *phenomenological* interpretation of categories. The key question is whether it contradicts well-established observations that we have good

reason to trust. To that end, let's look at it from the perspective of modern science.

One of the underlying assumptions of modern science, known as the **Mediocrity Principle,** holds that we have no inherently privileged position within the cosmos. It's a denial that our cosmic vantage point holds any special importance within the grand scheme of the universe, just because we happen to be occupying it. Essentially, the principle aims to avoid introducing unintentional *anthropocentric bias* into our study of the natural world. This is a noble intention, not just for scientific inquiry, but for philosophical investigation as well.

Given its emphasis on how conceptual categories are unavoidably anthropocentric, it may be surprising to discover that this phenomenological approach doesn't contradict the Mediocrity Principle. Instead, it extends it in a more fundamental way. By emphasizing how categories are grounded in a *human perspective,* we can avoid projecting our own needs, interests, and capacities onto nature. Counterintuitively, by acknowledging the anthropocentric origins of our categories, we gain the ability to critically examine their limitations. This is important because it facilitates a far less biased interpretation of their meaning and significance.

Consequently, this phenomenological perspective stands in sharp contrast to the unrealistic assumption that our categories are transcendent representations of a mind-independent Reality. In sum, we gain notable clarity by questioning this insistence that there's a single correct understanding of Reality that transcends the human perspective. By *embracing* this human vantage point, and incorporating its underlying limitations *into* our abstractions,

we more effectively safeguard ourselves against self-deception while we interpret Reality *through* these frameworks.

Transcendental Illusions: The Scientism Trap

At its core, the phenomenological approach to categories we've been exploring seeks to *embrace,* rather than *transcend,* the limitations of our human perspective. Beyond how counterintuitive this approach may seem, an additional objection might be raised. Doesn't a means of accounting for our human biases *already exist,* built into the structure of the *scientific method*?

To address this objection, we first need to distinguish between simplified portrayals of the scientific method in popular culture, and how it operates in a real-world context. These portrayals tend to overlook the integral role of *human interpretation* in scientific inquiry. In this folk understanding, scientific practice consists of a gradual accumulation of perspectiveless, uninterpreted 'facts', retrieved from a mind-independent Reality. In actuality, science is heavily interpretative; driven by a productive tension between competing viewpoints that, despite their differences, ultimately fuels scientific progress.

While this tension between competing viewpoints is crucial for scientific progress, it operates within a structured framework. This framework, known as the *scientific method,* provides the rigor and consistency that distinguishes science from other forms of inquiry. A more thorough characterization of science, therefore, must begin with the scientific method. The **scientific method** is a systematic process for investigating the *behavior* of

the natural world. It uses careful observation and controlled experimentation to develop iterative, falsifiable models that distinguish true cause-and-effect relationships from coincidental patterns.

Much could be said about the degree to which science achieves this laudable aim in practice. For our present purposes, we'll confine ourselves to what this more nuanced perspective on the scientific method means for our intuitions about categories. In essence, it demolishes the assumed link between 'Transcendental Categories' and genuine scientific principles, exposing noticeable shortcomings in folk theories of science. What's essential to understand about this *assumed link* is that it's derived from *metaphysical assumptions,* not a rigorous application of scientific principles. The supposition that our conceptual categories are transcendent representations of a mind-independent Reality is *not* a falsifiable conclusion that can be evaluated through controlled scientific experimentation. Instead, it's a *starting assumption* that incorrectly gets associated with the precision and authority of science.

The same critique also applies to "Transcendental Objectivity' and 'Transcendental Reason'. At their core, these Transcendental epistemologies exhibit a parasitical relationship with science; riding the coattails of its authority, while foregoing the rigor that makes science a credible source of knowledge. Unlike scientific theories, which are subject to testing and falsification, these Transcendental concepts are outside the scope of controlled experimentation. This isn't *necessarily* a problem, since not every type of truth is amenable to the methods of science - including many of the ideas within this book. But here's the catch: Transcendental epistemology leverages a mischaracterization of science to shroud itself within a facade of unassailable truth,

bolstered by its unearned adjacency to the hard-won credibility of science. Compounding this confusion, these viewpoints deny that they *have* any foundational assumptions that aren't amenable to scientific verification. This is problematic because it paints a distorted public image of science that's disconnected from its actual limitations.

At their worst, 'Transcendental Objectivity' and 'Transcendental Reason' can morph into a view known as *scientism*. This perspective, while claiming to champion science, actually misrepresents it in a profound way. In contrast to genuine *science*, **scientism** is a murky chimera of scientific aesthetics and metaphysical suppositions. It contends that the only 'valid' forms of truth are those that are amenable to the scientific method. At the same time, it insists that its own metaphysical assumptions, which are beyond the scope of science, are *absolutely true* - all while denying that it has any such assumptions. Needless to say, this is an inconsistent, and arguably incoherent, viewpoint; it's the epistemological equivalent of trying to have one's cake and eat it too.

Instead of stubbornly insisting that categories are only 'real' insofar as they correspond to an external, mind-independent Reality, let's make the case for a more flexible view. The gist of this view is that categories are *interactionally real* - products of a dynamic tango between our minds and our shared Reality, where the boundary blurs in the fluid motion of our experience.

Categories As Interactional Realities

Our exploration into the nature of categories has carved a path through certain entrenched intuitions about everyday reality. The journey, however, has been fraught with obstacles that have the potential to trip up this newfound understanding. Our first major hurdle was to recognize that *human limitations* aren't a bug but an essential feature of how we categorize. And our second was to reconcile this experientially-grounded approach to categories with the *scientific method*.

Having cleared these obstacles, our task at this juncture is to take a snapshot of our implicit, folk-understanding of what qualifies as 'real'. Developing this image will reveal how this conventional wisdom shapes our intuitions about what these categories ultimately *mean* in the grand scheme of things. Right at the outset, however, a perplexing question emerges. This conundrum arises from our rejection of Transcendental assumptions. In essence, if our conceptual categories aren't a retrieval of absolute features of a mind-independent Reality, then what, if anything, makes the distinctions they embody 'real'?

The short answer? These distinctions are 'real'. Just not in the absolute, mind-independent sense espoused by Transcendental viewpoints. Instead, our conceptual distinctions are 'real' in a different way; they're *interactionally real*. They have substance because they're grounded in our shared experience of Reality, distilling *actionable generalizations* that are attuned to our needs, capacities, and interests. These generalizations matter because they're how we *reflect* upon our embodied experience. In essence, they're the basis for the *mental models* that allow us to

draw inferences, predict patterns, and solve problems. Essentially, they're hallmarks of our distinctly *human* brand of intelligence; refined yet rooted in our shared evolutionary heritage with other animals.

Crucially, this grounding within a shared, experiential Reality is what allows us to meaningfully differentiate these *interactional realities* from 'imaginary' phenomena. Consider dreams and hallucinations, to list a familiar example. Though these mental phenomena may echo aspects of our shared world, their connection to it is inherently tenuous and inconsistent. The erratic nature of what we encounter within these domains renders them too unreliable to serve as a stable conduit to our shared, experiential Reality.

If we return our gaze to the conventional wisdom about categories, the unrealistic assumptions of this familiar folk-theory come more clearly into focus. The crux of the matter is that our conceptual distinctions aren't a glimpse into a 'neutral' Reality that exists apart from us. When this goes unacknowledged, it's all too easy to treat these distinctions as if they're variables in a universal equation with one right answer. Moreover, it's imagined that Reality will spill its secrets to whoever cracks this universal cipher. While this makes for an alluring metaphor, it's a misunderstanding of our situation within the world. While we certainly have access to a staggering array of stable truths about our universe, the core illusion comes from how this relationship is framed. The crux of the matter is that Reality isn't a 'problem' that can be 'solved'. *We* put these distinctions into the world. They exist *for us,* inseparable from how *we interact with* Reality.

By dropping this insistence that our conceptual distinctions are only 'real' insofar as they correspond to a God's-eye view of Reality, we clear the fog that obscures their true purpose. Which is to help us grapple with our existential situation within Reality.

Bottom line: 'Transcendental Categories', step aside. 'Interactional Categories', take the stage. While the crescendo we're building towards is an existential tango with our intuitions about 'realness', we enter into this dance through measured steps. With each movement, we'll be examining, challenging, and refining our habitual anchors to the everyday world. To kick things off, let's start with the basics: what does 'real' even mean?

Evolving Archetypes Of 'Realness'

"What is real? How do you define 'real'? If you're talking about what you can feel, what you can smell, what you can taste and see, then 'real' is simply electrical signals interpreted by your brain." - Morpheus, The Matrix

In The Matrix (1999), Morpheus embodies the *Wise Sage* archetype, who asks us to question our familiar assumptions about Reality. An **archetype** refers to patterns in our collective consciousness, which tend to pop up over and over again in stories, myths, and legends. The Sage is an archetype that stretches back to our distant past, serving as conduits of wisdom for their respective cultures.

The Sage fulfilled an especially important function in pre-literate societies. Within these cultures, oral traditions were the primary vehicle through which collective meaning and purpose was

preserved and transmitted. It's a societal role that stretches back to the dawn of human culture, with tribal elders preserving a group's mythological identity, and shamans serving as conduits to spiritual domains. Even as writing became more prevalent, the Sage archetype has endured, persisting across cultures and millenia. From its tribal roots to modern fictional portrayals such as Morpheus, the Sage is our lantern to the unknown, illuminating important truths about our connection to the world.

In keeping with this archetypal role, Morpheus challenges us to ease our grip on the everyday assumptions that anchor us to Reality, and see if they hold up under scrutiny. In this intent, Morpheus is in good company, echoing time-honored wisdom traditions which suggest that there's a 'true' Reality hiding behind the veil of everyday appearances. His question taps into archetypal allegories that liken our sense perception to cave dwellers looking upon shadows, mistaking these two-dimensional images for the full depth and richness of Reality. It's a metaphor whose power stems from life's hard lessons: appearances can deceive, and what we see isn't always what we get. This deep-seated resonance with the ambiguities of daily life helps to explain the enduring appeal of these allegories.

Since our aim at this juncture is to scrutinize our intuitions about the 'realness' of the everyday world, Morpheus's challenge is of obvious interest to us. While these 'tales of two worlds' are undeniably captivating, it remains to be seen whether they're apt metaphors for our relationship to Reality; or whether they're elegant dead ends that obscure more than they reveal. Our task, then, is twofold: dig down to the foundational assumptions of these grand metaphors, and see if they're sturdy enough to bear the weight of our embodied experience. After all, proposing an intriguing question is one thing, and providing a robust answer

that illuminates the subject matter is another thing entirely. So while Morpheus might be onto something here, let's use the Enactive framework we've been developing to dig deeper.

What Morpheus is calling into question is a folk-understanding of Reality that should be deeply familiar to someone within a scientific culture. This intuitive view aligns closely with what philosophers classify as 'Realism'. **Realism** is an umbrella term for viewpoints which posit that Reality has an 'absolute ground', or a *fundamental basis* for what's 'really real'. In this stance, an entity's 'realness' comes from its connection to *ontological primitives* within Reality - essentially, basic building blocks from which all else is derived. Although Realism is a well-defined perspective within philosophy, in most other contexts it tends to operate as an unspoken background assumption. In sum, Realism isn't just a philosophical perspective; it's an invisible lens through which we tend to interpret Reality.

To appreciate just how deep the Realism rabbit hole goes, consider the ease to which its assumptions become embedded in our sense-making frameworks. Physics isn't 'just' an iterative approximation of how Reality *behaves*, it's an objective description of what Reality *is*. God isn't 'merely' a felt presence that provides meaning and purpose to our lives, but the ultimate 'first mover' from which all of Reality springs forth. By that same token, consciousness isn't 'only' our direct perspective within Reality, it's the promised contender that will dethrone physics as the *actual* bedrock for all that exists.

Note that the use of 'just', 'merely, and 'only' here isn't intended to diminish these viewpoints. It's meant to highlight a commonality for how these frameworks are interpreted, which tends to slip beneath our notice. The shared thread of these diverse

perspectives is that entities and phenomena need to have an existence which transcends our human perspective within Reality to be 'truly real'.

So that's a high level overview of Realism. Now, let's dive into the nitty gritty of its hold over the perceived 'realness' of our conceptual distinctions. To that end, we turn to two of its key variants - twin Rosetta Stones which operate so seamlessly that we rarely notice their presence. We could think of them as our background interpreters for daily life; content to quietly transcribe our perceptions until an encounter with the unfamiliar or the paradoxical brings them to the fore. So without any further ado, let's introduce to the stage *naive realism* and *scientific empiricism* - representing the 'simple' and 'complex' sides of Realism's coin.

To kick things off, we'll capture a snapshot of the 'simple' manifestation, known as **naive realism.** The crux of this stance is that the world is exactly as it appears to us in ordinary perception, and that others perceive it in the same way. We can think of it as the unexamined orientation that we tend to default to in daily life, when we're taking our sensory impressions at face value. Settling into naive realism's comfortable rhythms, we see a red apple and assume that its redness exists independently of our perception. We look up at the night sky, and take it for granted that the stars themselves are actually twinkling, instead of recognizing it as an effect of the Earth's atmosphere.

When stated explicitly, one might be tempted to write off this way of relating to the world as 'crude', and thus devoid of any value. But let's not judge it too hastily. If we look beneath the surface, we find that far from being intrinsically 'wrong' or 'useless', it's instead a vital component of how we navigate the

day-to-day world. For a large proportion of everyday situations, these quick and basic impressions are perfectly sufficient. Take crossing the street: we see a car, assume that it's really there, and react accordingly - no deeper reflection required. Then multiply this example by the hundreds of similar interactions that make up daily life, and we can gain a deeper appreciation of why it's an indispensable presence in our lives.

However, in spite of their practical utility, these snap-judgements have glaring limitations that can leave us ill-equipped to deal with a complex world. They can be a serious hindrance when we encounter ambiguities that demand a more nuanced level of engagement. This becomes especially important when surface appearances are misleading, or when there are relevant complexities that can't be fully grasped without analysis and reflection. Precisely because naive realism is a largely unreflective stance, it tends to collapse like a house of cards when subjected to sustained scrutiny. Science has revealed a world of microorganisms and fundamental forces that are invisible to ordinary perception, which nonetheless shape our lived reality in a profound way. Moreover, psychology and neuroscience have uncovered a host of unseen cognitive processes that direct our thoughts and behavior, outside of our awareness or control. In sum, while naive realism is a potentially useful heuristic in day-to-day life, it can become a serious obstruction in situations whose ambiguities call for a more deliberative approach.

So that's the 'simple' version of our folk-understanding of Reality. But what of its more refined variant? For that, we set our sights upon *scientific empiricism*. Before examining its hold over the perceived reality of our conceptual distinctions, let's first draft a blueprint of *empiricism*. To that end, we'll introduce empiricism in

its broad, historical sense. We'll then reveal how its partnership with modern *science* propelled it into the familiar, folk-interpretation of Reality that many of us take for-granted today. **Empiricism** posits that our sensory experience and its extensions are the final litmus test for what's ultimately 'real'. Its key tenet is that observation of the 'external' world is where the rubber meets the road for verifying that our ideas have a basis in objective Reality. What empiricism drives home is that if we want to know whether it's raining, we'll have to go beyond armchair theorizing and actually look out of a window.

While this may overlap with naive realism's shared focus on the primacy of sense-perception, empiricism sets itself apart by acknowledging the potential gap between appearances and reality. Yes, empiricism still holds that accessibility to sense experience is determinative for what's objectively 'real'. But unlike naive realism, it insists these surface-level observations aren't where inquiry ends - it's where it begins. The basic aim of empiricism is to go beyond what's immediately obvious, by using *reason* to interpret and extend our sensory observations in ways that can explain and predict phenomena. To illustrate this difference, let's return to an earlier example. While naive realism would also acknowledge that it's raining, it takes empiricism to tease out patterns for *when* it's likely to rain, and *how* different levels of rainfall affects the vegetation in our garden. In other words: empiricism isn't just sense-observation, it's sense-observation paired with reason.

So that's a broad overview of empiricism. Now let's trace out where *science* enters into the picture. Though popular perception will sometimes conflate the two halves of *scientific empiricism*, in actuality there can be no doubt as to which is the senior partner. Case in point: when modern science was getting off the

ground roughly four centuries ago, empiricism was the millenia-old bedrock from which it took flight. Emerging relatively independently in both Eastern and Western thought, empiricism's early practitioners included such paradigmatic heavy-hitters as Aristotle and Siddhartha Gautama (the Buddha). Though Aristotle and Siddhartha explored life's mysteries through highly distinct philosophical lenses, they were united in stressing the importance of direct observation paired with reason, albeit in different domains. (Aristotle's emphasis was on how we fit into the systems of the world, while Siddhartha's was on how we experience it.)

While pre-scientific empiricism significantly expanded the scope of our problem solving repertoire, key aspects of it could be considered outdated by today's standards. As we shift our focus to its more rigorous *scientific* variant, we'll gauge whether this perception of early empiricism's obsolescence is justified. Are we just flat-out better off with this more precise iteration of empiricism? Or are we throwing the baby out with the bath water by discarding this foundation for modern science entirely?

As we explore these questions, we'll illustrate how this refined form of empiricism morphed into *scientific realism*, and what this has meant for the perceived 'realness' of our conceptual categories. We'll also trace out how this metamorphosis unwittingly codified a seemingly unbridgeable gulf between our 'inner' experiences and 'external' Reality - and why this split is significant. What we hope to highlight is that this *subject-object* division is ultimately a *mental construct* that masks a deeper underlying unity.

But here's the kicker: recall that mentally constructed does not mean 'imaginary'. There are sensible reasons for why this

bifurcation of Reality is *intuitive* for us. With this in mind, we'll show how the *Enactivist* framework we've been developing offers a promising path for bridging this subject-object divide. Crucially, Enactivism doesn't deny the 'realness' of our conceptual categories. It instead reframes them as *interactionally real*, emerging from our concernful involvement with the world.

To fully appreciate Enactivism's approach for reconciling this underlying unity with scientific realism's valid insights, we'll need to understand the roots of this subject-object divide. Key to this examination is the concept of *relevance*, or how we filter and prioritize information based on its perceived significance for our goals and experiences. By showcasing how relevance is central to how we perceive the world, we can begin to unravel why this bifurcation of Reality feels so natural to us, and how scientific realism entrenched this subject-object dichotomy in our thinking.

Horizons Of Relevance

The crux of empiricism's staying power, in both its early and scientific incarnations, stems from its broad applicability to a wide range of practical problems. The key to this versatility? It's tied to why our problem-solving frameworks are *useful* to us in the first place. Just as *tools* empower us to shape raw materials into desired forms, *methodologies* such as empiricism equip us to steer events towards desired outcomes. Put simply, a **methodology** is a structured, replicable practice for guiding actions towards an intended purpose. When working as intended, the guidance that these frameworks provide isn't arrived at by happenstance. It instead follows from successfully pinpointing what's *relevant* for a particular problem.

While pinning down what's pertinent to a given goal may sound straightforward, it can be deceptively complex. Our lifetime of experience with everyday tasks tends to mask the formidable challenge of discerning relevance in situations where we lack this expertise. The process of determining what's *salient* - that is, what stands out as important - for a given purpose is known within cognitive science as **relevance realization**. While it's yet to become a household term, *relevance realization* exposes a pivotal aspect of our problem-solving that's easily overlooked in folk-epistemology.

The development of *germ theory* aptly exemplifies many of these challenges. It shines a spotlight on how our intuitions of salience can be highly misleading, while revealing the ease with which outcome-determinative factors can elude the untrained eye. While it's become common sense that *diseases* are transmitted by germs spread through bodily fluids and contaminated material, this wasn't evident to *anyone* just a few centuries ago. The existence of microorganisms, not to mention their power to disrupt our bodily processes, isn't an inference that's readily drawn from surface-level observation.

The barrier to connecting these dots can be traced back to the environmental context that our perceptual abilities are adapted to. In essence, our sensory systems are evolutionarily calibrated to an intuitive, human-centric scale. Think of this perceptual baseline as the person-sized 'factory setting' to which our experience of both space and time is instinctively attuned. To borrow and extend a term from meteorology, let's call this anthropocentric frame of reference the **mesoscale** (*from the ancient Greek words for 'middle' and 'size'*)**.** So what's the link between the *mesoscale* and our intuitions about relevance? The

connection is that it's our perceptual canvas for drawing inferences from our embodied experience.

Though our intuitions of relevance are formed at the *mesoscale*, this anthropocentric realm is just a tiny slice of Reality. Venturing beyond this familiar domain poses a number of unique challenges, beyond the fact that phenomena become difficult to observe and manipulate as the scale shifts away from our day-to-day perspective. At extremely small and large scales, everyday phenomena can behave in very counterintuitive ways. Take water, for instance. While its behavior is well accounted for at the mesoscale, from an ant's point of view water becomes a sticky, globule-like substance with significant surface tension. And from a planetary vantage point, its currents shape the climates of entire continents as it circumnavigates the globe.

Moreover, we often fail to grasp how day-to-day phenomena are intrinsically linked to processes operating at temporal and spatial realms vastly smaller or larger than our habitual frame of reference. Returning to our water example, for most of human history it would have taken a feat of imagination to connect the ocean tides to the invisible pull of the distant moon and sun. That is, until Newton's field guide to universal gravitation upended our cosmic perspective. By the same token, attributing the air that we breathe to the waste products of tiny, invisible creatures in the oceans would have seemed equally far-fetched. Then imagine Leeuwenhoek's surprise at his chance encounter with microbes from tinkering with glass lenses - and how this discovery would go on to change the world.

The basic takeaway is that our habitual intuitions about *relevance* are tightly bound to the *mesoscale* that serves as our stage for daily life. While early empiricism probed the limits of

this human-sized backdrop, venturing beyond its comfortable boundaries requires highly specialized techniques. Which brings us to the innovations that the *scientific method* brought to empiricism - and how its transformation of daily life propelled this methodological toolkit into a bona fide folk-theory of Reality.

But before we part the veil of *scientific realism*, it will be instructive to touch upon the historical contingencies that gave birth to modern science. Lest we forget, the scientific method wasn't an inevitability, and its successes were far from guaranteed. Instead, the achievements that would propel the popular image of science from a specialized mode of inquiry into a de facto 'theory of everything' weren't preordained. Far from mythological depictions of science as a universal cipher to 'life, the universe, and everything', it's important to keep in mind that the science method was invented - not 'discovered'. In keeping with our theme that our *human perspective within Reality* is an essential feature of our problem solving frameworks, the story of science can be traced to a specific time and place that was ripe for an epistemological revolution.

The Historical Foundations Of Modern Science

The iterative toolkit that would become *modern science* found its initial foothold in 16th and 17th century Europe, amidst a convergence of highly contingent social factors. A Pandora's Box of socially disruptive forces was busy uprooting European civilization from feudalism, which had taken root in the ruins of the Western Roman Empire.

The prevailing social order, consisting of subsistence farmers bound in hereditary service to a military aristocracy, had been devastated by the Black Death - a civilizational apocalypse that wiped out a third of Europe's population. Carried by flea-infested rats who'd made themselves at home amidst the open-sewers and waste-filled streets of European towns and cities, the fetid conditions of daily life were ripe for this plague to spread its tendrils into every corner of society. Sparing neither cities nor countryside, Europe experienced rapid depopulation over just a handful of years, shattering the demographic foundations that had sustained feudalism for centuries. With laborers now worth their weight in gold, centuries of feudal bondage began to crumble, sowing the seeds of a transformative *zeitgeist* which would go on to change the world.

From feudalism's ashes, a new social order was coalescing around a form of economic activity that historians would later term *mercantilism*. Driven by commercial interests and secured by maritime power, cosmopolitan exchange was the lifeblood of this new order, flowing into Europe from the New World. Of course, this early form of globalization bore little resemblance to 'peaceful exchange' - it was enforced with brutal systematicity through guns, germs, and steel.

Alongside these developments, the Protestant Reformation had loosened the Catholic Church's iron grip over European thought, undermining its ability to suppress knowledge perceived as a threat to its authority. This decentralization of knowledge was accelerated by the printing press, which opened the doors to a dissemination of information on an unprecedented scale.

Ancient Greek empiricism, preserved as an incidental byproduct of European monastic transcription and Islamic scholarship, was

finding a new audience amongst an emerging stratum of society eager for practical knowledge. An ascendant entrepreneurial class, unshackled from centuries of feudal constraints, found its interests increasingly served by empirical proofs over appeals to authority. To that end, military competition amongst rival European powers had created a practical need for what we would now call 'Research and Development', entailing a far more rigorous approach for how ideas are tested against reality.

In sum: it would be a mistake to think of the development of *science* as inevitable. Quite the contrary: it was driven by practical problems which emerged due to a convergence of historical contingencies. The impetus behind the invention of science can be traced to limitations of early empiricism, which was proving inadequate as the problems it was applied to became increasingly complex. The crux of these shortcomings is that pre-scientific empiricism was calibrated to search for patterns of *relevance* within our person-sized mesoscale. In itself, there's nothing surprising in this limitation, since the mesoscale is the obvious place to begin probing for clues in lieu of additional information that points elsewhere.

But lest we paint a misleading picture, let's make sure to give early-empiricism its due before moving forward; it was able to accomplish quite a lot within this narrow, person-sized slice of reality. Beyond setting the stage for modern science, its success in probing this everyday domain brought us the principles behind many ideas and technologies that we still rely upon today. Agriculture, mathematics, navigation, and wheeled transport are testaments to this legacy.

These noteworthy achievements notwithstanding, compared to its later scientific variant, the scope of problems that early

empiricism was effective for was reaching a perceptual ceiling. The crux of the matter is that there's nothing inherently special about the mesoscale, beyond the fact that it's what our perceptual system and intuitions are calibrated for. And as we've seen, what affects us on the mesoscale can have explanations that are invisible to us from this perceptual default.

And with that, we wrap up our lightning tour of the historically contingent origins of modern science. As we've seen, empiricism was a notable expansion in our problem-solving repertoire, applicable to a host of day-to-day domains. But it would pale in comparison to the profound shift that occurred as the scientific method emerged. As we'll see, its unprecedented operational success in transforming virtually every aspect of daily life would inadvertently birth a strange metamorphosis. What began as a more rigorous framework for addressing practical problems would be gobbled up, bit by bit, by tacit metaphysical assumptions that are outside of what science itself can provide evidence for. In our next section, we'll pull back this veil of *scientific realism* to reveal the more nuanced relationship between our models and the Reality they approximate.

Parting The Veil Of Scientific Realism

If early empiricism handed us a box of rough-hewn tools for tackling everyday tasks, science would offer us precision instruments for unlocking realms far beyond our natural reach. When skillfully wielded, straightforward observational reasoning can provide serviceable diagnostics for zeroing in on desired outcomes - provided that problem-relevant features are in plain sight. Which brings us to the key caveat of this approach: its

operating domain is constrained to what we can observe and manipulate from our person-sized mesoscale. As we've seen, what affects us on the mesoscale need not have its origins there - hardly surprising when we recall that this familiar perceptual domain is but a tiny slice of reality.

This widening gap between straightforward observational reasoning and concrete, material demands drove sharpening tension between theorists and practitioners. Practical applicability is where the rubber meets the road for theories that purport to explain aspects of our world, and in this regard empiricism was straining against its methodological limitations. The 'gotcha' of this approach? It had become a victim of its own success, increasingly thrown at problems whose causal chains lay far beyond its operational constraints.

In an era where discerning nature's hidden patterns was rapidly translating into tangible commercial spoils, empiricism was due for an update if it was to meet escalating practical demands. The core issue confronting its practitioners was an *inferential bottleneck*, stemming from a tricky framing problem as the situations it was thrown at grew more complex. Put simply, existing forms of empiricism lacked the precision to suss out reliable links between *cause* and *effect.*

At first glance, establishing cause and effect seems straightforward enough. Drop a glass, and it shatters. Heat up water, and it boils. For problems of any real depth, however, it can be deceptively hard. It's one thing to notice a disconcerting rattling from your car's engine compartment when you press down on the accelerator. It's quite another to figure out that the rattling isn't coming from the engine at all, but from a worn-out CV joint in your vehicle's drivetrain that only manifests under

acceleration. The key for why this is trickier than it first seems lies in how *causal patterns* can be invisible to us without proper investigative tools that take expertise to wield effectively. Case in point, our natural tendency to leap to the most obvious explanation - the engine must be the problem since that's where the sound is coming from - can lead us astray when the *effects* we observe stem from *causes* that aren't immediately apparent. In such cases, we may end up gasping at *patterns* that are intuitive but misleading.

While human psychology is hard-wired for pattern recognition, the vast majority of regularities that we observe are coincidental associations rather than causal pathways. Untangling causal threads from this web of spurious associations can be especially challenging. The key to this dilemma is *relevance*. Without being able to identify what's *relevant* for a particular problem, we're left pulling at loose threads that don't weave into a coherent tapestry. The art of discerning relevance lies in tracing out threads of genuine cause-and-effect from a background of coincidental patterns. Our technique for separating these strands? *Correlation does not imply causation* - meaning that you can't assume that one event causes another just because they occur together.

An oft cited example is that both *ice cream* sales and *shark attacks* go up during the summer, but that doesn't imply that ice cream is *relevant* to why shark attacks are more likely to occur in the summer. While this is a deliberately silly example, in many other contexts the inability to separate correlation from causation can have deadly consequences. Before scientific principles became established within Western medicine, doctors were more akin to quacks whose remedies were often worse than the ailments they were attempting to treat. A common idea from this era was that diseases were caused by bad blood,

leading to practices such as bloodletting - literally draining a sick person of their blood. While this seems insane to us today, the fact that people would often recover *in spite* of their prescribed 'treatment' created a powerful illusion that they got better *because* of it.

ADDITIONAL READING

If you would like a more in depth exploration the topics we've covered so far, here is a list of recommended works which have influenced the ideas and approach of this book

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The Embodied Mind: Cognitive Science and Human Experience by: Fransisco J. Varela, Evan Thompson, and Elanor Rosch

Metaphors We Live By by: George Lakoff and Mark Johnson

The Phenomenology of Perception by: Maurice Meleau-Ponty

Philosophy in the Flesh : the Embodied Mind and Its Challenge to Western Thought by: George Lakoff and Mark Johnson

The Righteous Mind by: Jonathan Heidt

The Scout Mindset by: Julia Galef

Sex, Ecology, Spirituality by: Ken Wilber

Skillful Coping by: Hubert Dreyfus

The Structure of Scientific Revolutions by: Thomas Kuhn

The Tree of Knowledge by: Huberto R. Maturana and Francisco J. Varela