

Awakening from the Meaning Crisis

Origins

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Uncorrected Proof

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The Question of Meaning

Welcome to *Awakening from the Meaning Crisis*. This is the first in a two-book set, adapted from a lecture series of the same name, that summarizes my lifelong project to understand the nature and function of meaning in life.

As a cognitive scientist, I am keenly interested in how naturalistic accounts of human cognition inform our understanding of intelligence, sacredness, and the cultivation of wisdom. Over many years, I have closely monitored and dialogued with a tradition of thinkers, researchers and writers who have identified a nebulous problem in our modern epoch. If we could describe this problem simply, there would be no need for this book to exist. However, your intuition may already be filling the gaps; it has something to do with the decentring of human life from its cosmic significance, a decline in our sense of purpose, a sensation of having lost the soul that gave earlier human societies their adaptiveness and vitality. What we are left with, it seems, is a feeling of having lost our place in the world, along with a sense of who we are, and what we ought to do with ourselves.

After dedicating my personal and professional energies to this problem, I am convinced that it, like meaning itself, operates at many scales of personal and communal life. It is the culmination of a sequence of historical forces that can only be understood through careful, long-form inquiry. My intention in these books is to undertake this inquiry, to draw together an argument that integrates various observations and insights about the nature of human meaning across time. The purpose in presenting such an argument is not simply to exposit a problem, but to yield a deeper understanding of ourselves as cognitive agents, and help to pave the way for an intelligent response.

This lifelong project began many years ago when, at the University of Toronto, I began to notice a growing confluence between people who were interested in Buddhism and people who were interested in Cognitive Science. As you read on, we will explore what Cognitive Science is, and why it is so important to the project of this book. Buddhism, of course, is well known even to those who don't practice it, but it too will require some careful reintroduction. In the forthcoming chapters, we will explain why this ancient religious tradition, when it is placed in dialogue with Cognitive Science, takes on a new kind of meaning. In time, you may discover—as I did many years ago—that this connection was not only possible, but tremendously fruitful; it has created a new source of understanding to all who might practice the project of wisdom.

For most people, mindfulness is a much more familiar term in our contemporary culture. Indeed, we seem to be going through what has been called the *Mindfulness Revolution*. Mindfulness is now spoken of everywhere in mainstream media. Bookstores are devoting entire sections to the topic, and it has been invited into schools, universities, governments and corporate culture. We see evidence of its presence in many different sectors of life. Why, though? Why is this Mindfulness Revolution occurring?

As you may guess, this revolution is emerging from the very confluence I began noticing many years ago. As Cognitive Science comes into maturity, more people are trying to integrate the theory of this discipline with the wisdom cultivating practices found within Buddhism. Still, we may well ask: why is this happening now, and why is it so explosive in nature? What do we mean by *mindfulness*? Some of my work tries to answer this question, and this book will describe it step by step.

In order to better understand the confluence between Buddhism and Cognitive Science, we must also take notice of how it converges with other important movements. Both academically and in the public sphere, people are becoming more interested in the topic of *wisdom*. This is something people did not talk about very much a few decades ago, but wisdom is now a hot topic within psychology and Cognitive Science, and books offering instruction in wisdom are becoming popular again. For example, I recently bought my son a book called *How to Be a Stoic* by Massimo Pigliucci. Consider this novelty: how is it that a philosophical practice over two thousand years old is once again in demand? Why is there such hunger for wisdom? Why are people meeting this hunger by looking into philosophies of the Hellenistic period? As we'll soon discover, I think there are compelling answers behind all of these questions.

There is another important movement that we cannot ignore: the growing interest in psychedelics, and psychedelic experience. Academic interest in this topic dates back several decades, of course, and its influence in human culture has persisted for millenia. Yet as our knowledge of the brain transforms, so does our understanding of these mysterious substances, their capacity to radically alter our perspectives, our sense of meaning, and the way we participate in the world. For example, there is now clinical evidence that psychedelics assist in releasing people from treatment-resistant addiction and overcoming post-traumatic stress disorder. The normal recovery rate for individuals suffering from post-traumatic stress disorder undergoing therapy is around 20 percent. When psychedelics are introduced into the therapy, the healing rate increases up to 80 percent.¹ What accounts for this dramatic effect? What prompted this interest in using psychedelics in the therapeutic context?

¹ (Oehen *et al.*, 2013; Krediet *et al.*, 2020)

Finally, there is a renewed public interest, matched by a huge academic interest, in the subject of happiness, and meaning in life. In some ways, this isn't a new phenomenon; we have always been a happiness-oriented culture, and the American ethos has encoded this value into our society. The American Declaration of Independence famously states that humans have inalienable rights, including "Life, Liberty and the pursuit of Happiness." Yet this pursuit of happiness has taken an interesting turn in recent years; the topic of *meaning* is coming back to the fore. More and more, people are becoming preoccupied about not just material success or contentment, but what it *means* for a human life to be meaningful. As it turns out, this is quite a fundamental question, and it appears to reach so deeply into our experience as human beings that we have a very difficult time accounting for it.

Thanks to this convergence of Cognitive Science and Buddhism, and the renewed interest in wisdom, we have more adequate explanations to instruct our intuition, and to explain the primacy of meaning in human life. We are beginning to understand again that meaning in life, rather than simply an accessory to survival, is essential to human flourishing, predictive of well-being in every sense of the term. It is little wonder that people seek it so voraciously. Nor is it a coincidence that all of these movements are happening right now: the confluence between Buddhism and the Mindfulness Revolution, an interest in wisdom and ancient philosophies like *Stoicism*, a burgeoning interest in psychedelics, and in transformative and *mystical experiences*. There is a pattern to all of these efforts, a certain hunger in the human spirit, a depth of need that has not been fully understood. When we begin to recognize this need as a feature of our spiritual condition, we can begin to piece together a unifying account for why all of this is happening. Each of these movements is responding to a crisis of meaning, a disorienting sense that we have forgotten some essential dimension to reality, and lost our relationship to what is good, true and beautiful. This crisis has deprived us of something essential at the center of our lives. It has been described in many ways by many thoughtful people across time, but we might think of it quite simply as a famine of the spirit, an existential illness that has taken shape in the human brain, body, culture and soul.

The Dark Side of the Meaning Crisis

In the first section, we discussed what might be called the brighter side of the Meaning Crisis, all of those practices and traditions that are attempting to reacquire our relationship with a meaningful life. However, there exist a darker set of factors that seem to be converging as well. Although some people dispute it, the evidence is becoming clearer that we are going through a mental health crisis.² Suicide is spiking, and while some

² I discuss this evidence at length in my talk entitled, "The Meaning Crisis, Religio, and Religion in the 21st Century," which you can watch here: <https://www.youtube.com/watch?v=Y0JxL-acvuM>.

socioeconomic factors account for this, there are clearly other influences at work as well. In April 2020, the US National Center for Health Statistics published a data brief reporting increased suicide rates between 1999 and 2018.³ These “deaths of despair” cannot be easily sourced to material conditions, any more than depression can be reduced to chemical imbalances in the brain.⁴ Instead, many people are expressing an acute sense of having lost touch with reality. More and more often, in both individuals and groups, we encounter expressions of nihilism and cynicism, of deep frustration and futility. We no longer trust in our public institutions. We have completely lost faith in our political and judicial systems. Religious affiliation is declining consistently, and participation in community organizations is in decline. If this cultural disintegration was true before, it has only been amplified in the wake of the COVID-19 pandemic.

When these systems of culture become unglued, it becomes increasingly difficult to keep a coherent model of the world. The world itself begins to feel untrustworthy, as though we can no longer feel ground beneath our feet. In our book on *Zombies in Western Culture: A Twenty-First Century Crisis*, my co-authors Christopher Mastropietro, Filip Miscevic and I argue that the sense of being out of touch has intensified the prevalence of *bullshit*⁵—a term inspired by the work of Harry Frankfurt. Bullshit, unlike lying, works by making you unconcerned with whether speech is true or false. The bullshitter, like the Sophists of antiquity, does not appeal to any measure of truth outside of the needs of the moment. Instead, he tries to capture your attention with the *catchiness* of his claim, how much it provokes something inside of you: some desire, belief or association that may not be fully conscious. In other words, the bullshitter has no love or relationship with reality, only with appearance. For him, *man is the measure of all things*. His goal is to overpower you with the force of subjective conviction.⁶ We already see plenty of evidence for this kind of relativism in the public media of course, but it also afflicts the academic world.

In *Zombies in Western Culture*, my co-authors and I observed that the intensification of bullshit seems concordant with increases in several of these other dark factors—the decline in religious participation, the decay of familial and social systems, and the ideological inflation of political discourse. Consequently, we are spending far more time in our virtual environments, and there seems to be increasing evidence of a connection between various social media outlets and depression, as well as loneliness (Kuss & Griffiths,

³ NCHS Data Brief 362, 2020: <https://www.cdc.gov/nchs/data/databriefs/db362-h.pdf>

⁴ Though much debate remains on this topic, this reductive view of depression has generally been discredited.

⁵ I am using this term technically, as put forth by Harry G. Frankfurt in his essay entitled *On Bullshit*, 1980.

⁶ For those interested, this phenomenon - called *misology* - is also examined at length by D.C. Schindler in his book, *Plato's Critique of Impure Reason: On Goodness and Truth in the Republic*, 2015.

2011). We are dealing with a loss of social community, but also the sense of company we keep within ourselves. The loss of these relationships, inward and outward, somehow seems connected to the loss of our relationship to reality itself, our ability to resist the blandishments of bullshit, and to keep in touch with some more ultimate value.⁷

For many people, the notion that we thirst for transcendent value can seem abstract and academic, perhaps even imaginary. But we are often acting it out when we least suspect it. This trend towards the erosion of meaning shows up implicitly in the entertainment we seek, and the mythologies we elevate. Why, for instance, are zombies so ubiquitous? Why are superheroes so popular? Why is *Star Wars* nearer and dearer to us than the religious traditions that influenced it? These mythological forms are expressions of an intuition that we have reached a dead end in our cultural worldview, and that we are in turns despairing over its loss and attempting, nostalgically, to revive it. Notice how references to “crisis” and “collapse” have—like the zombie apocalypse—become constant factors in our discourse. All of these symptoms, which indicate that meaning is under threat, are now so pervasive that we take them for granted. Several decades ago, movies depicting apocalypse and collapse were considered radical science fiction. But now, these themes have become part of our cultural ambience. The modern world seems chaotic and impersonal, yet at the same time scarce, finite, even boring. When unforeseen events in the world force us to keep company with ourselves, we find the same malaise⁸ in our interior lives. A vacuum opens beneath us, a grief for something lost. But we struggle to remember exactly what is lost, and this spiritual amnesia only intensifies the feeling of hopelessness. It becomes difficult to diagnose, let alone to treat, a problem that we cannot see or feel, precisely because it is behind *how* we see and feel.

Just like their positive counterparts, there is a pattern to these dark factors that points us to a unified explanation. This book will argue that they are all interconnected, variations on a theme, symptoms of a profound crisis in meaning that we shall call *The Meaning Crisis*. This is not the only crisis we face; the Meaning Crisis is interacting with other crises, such as the environmental crisis and the socio-economic crisis. It plays the role of a silent catalyst, undermining our ability to solve problems by inhibiting the perspectives we are able to take on ourselves, as individuals and as a species. But while these other crises are discussed at length in the public sphere, the Meaning Crisis is generally unmentioned. It is difficult to diagnose a problem that is so fundamental, and that operates at every scale of culture. It is complicated enough to require a genealogy, an account of how and why it came to be, and what it tells us about our nature as human beings. That is the

⁷ Mary Eberstadt makes cogently argues for the connection between the dissolution of family systems and the spiritual crisis of the West. See *How the West Lost God: a New Theory of Secularization*, 2014.

⁸ See Charles Taylor, *The Malaise of Modernity*, 1991.

task of this book. To begin understanding the Meaning Crisis, we must first understand what *meaning* actually means.

What is this meaning that is coming to crisis?

Why do we hunger for meaning? How do we seek to cultivate wisdom? As you will discover in this book, these two concepts form a call and response with one another, and it is crucial to understand how deeply they are connected. Wisdom is ultimately about how to generate and enhance this meaning. Wisdom is about *realizing*. This means that cultivating wisdom generates realization in both senses of the word: becoming aware and making real. Wisdom is about realizing meaning in life in a profound way.

How do we cultivate this wisdom? What does it mean? This book will talk about wisdom cultivation not just theoretically, but practically as well. What are some practices, for example, that people are engaging in to address this need for the cultivation of wisdom? What role, for example, do *mindfulness practices* play in this cultivation?

Throughout this book, we will keep coming back to these three questions:

- What is this meaning?
- Why do we hunger for it?
- How do we cultivate the wisdom to realize it?

To answer these questions adequately, this book will attempt to trace the evolution of meaning in our culture. What is it? Why is it so important to the development of our humanity? Then, more specifically, this book will focus on the history of the Meaning Crisis. Why did it arise? What were the historical factors? By tracing this closely, we will get a historical account of meaning that makes sense of our predicament. We will see how perennial parts of our nature—features of human experience that are consistent across time—have interacted with this historical evolution. We will discuss how they have collided to produce profound traditions of wisdom, while also laying the conditions for their collapse.

As we progress, I will address and explicate the connections between meaning, wisdom and a third related concept: *self-transcendence*. It may sound high-minded and mystical, but self-transcendence is an essential need for human beings. It performs core functions for our cognition. For instance, there exist deep connections between meaning, wisdom and *Altered States of Consciousness* (ASC). Throughout our history, human beings have consistently sought ways to alter the quality of our conscious experience by manipulating our physiology and behavior. Other intelligent organisms also engage in this;

Caledonian crows will tumble down roofs in order to make themselves dizzy, for no other apparent purpose than to alter their state of consciousness.

What is going on here? Why would intelligence need to be conjoined to an ASC? Why in particular have human beings developed such sophisticated processes for generating, harnessing and interpreting these ASCs? We will consider ASCs in connection with *shamanism* and *ritual*, but first we will talk about how it relates to *flow*,⁹ that state of heightened attention that sharpens our consciousness and competence, and deepens our participation in the world—the feeling of “being in the zone.” We will explore why people seek the flow state, and why it is so powerful. We will explore the connection between the flow state and psychedelic experiences and, more importantly, the mystical experiences that can occur within some of these psychedelic experiences. Mystical experiences, as it turns out, are more important and transformative than the merely psychedelic ones, and there is a subset of those experiences that are very crucial to transforming people’s lives. These are *Awakening Experiences*, in which people return from the mystical experience feeling that was somehow more real than reality. They feel a compelling need to change their world and themselves to fit that new reality. They engage in what philosopher L.A. Paul has called a *transformative experience*,¹⁰ a kind of *quantum change* that causes a radical transformation of their lives. We now have good research to complement these subjective accounts.¹¹ People’s lives seem to get better after these Awakening Experiences, and we will explore why this might be true. Eventually, we can bring all of this together to propose a cognitive scientific account of *enlightenment*—what it is, and why it alleviates the suffering caused by this lack of meaning. This form of suffering might feel particularly urgent for us today, but it has always been a perennial threat to human beings, at least as far back as the *Axial Revolution*.

In order to properly address enlightenment, and the question of meaning, we must also interrogate the darker aspects of meaning making. What are the deep, profound connections between this meaning making, which is so central to our cognitive agency, and our endemic capacity for self-deception and self-destruction? There is something about human consciousness, it seems, that elicits a special kind of suffering, just like the daytime sun has its shadow in the night. This is one of the tenets of Buddhist thought, and wisdom found in many religious traditions; there is something about our capacity for meaning that draws the threat of meaninglessness, and we must learn to live within this paradox if we

⁹ A concept first introduced by Mihaly Csikszentmihaly. See *Finding Flow: The Psychology of Engagement with Everyday Life*, 1997.

¹⁰ See L.A. Paul, *Transformative Experience*, 2014.

¹¹ (Yaden et al., 2017; MacLean et al., 2011)

hope to summit our human potential. As C.G. Jung once wrote, one of the perils of having a soul is the risk of losing it.¹²

When we consider this human complexity, we can begin to see why we are so awash in bullshit; self-deception is endemic. To properly understand it, we must make an important distinction between *foolishness* and *ignorance*. Ignorance is a lack of knowledge, whereas foolishness is a lack of wisdom. Foolishness occurs when your capacity to engage your agency or pursue your goals is undermined by self-deceptive and self-destructive behavior. This behavior is a perennial vulnerability in your cognition. As I will argue, the machinery that makes you so adaptively intelligent is the same machinery that makes you susceptible to foolishness. It is important not to underestimate this foolishness, or to think of it as belonging to a few hapless people. We are all susceptible to this behavior when we confront, or are confronted by, the dark features of our existence: life's finite nature, the presence of fatalism, the constancy of change, the erosion of life by time, and the tension between our lofty aspiration and life's unpredictable fatalities. These confrontations induce in us experiences of absurdity, alienation, futility and horror. They undermine our grip on reality and our ability to make sense of the world. And yet there is often a deep meaningfulness on the other side of these experiences. When we lose the capacity to confront them, we begin to avoid some essential part of our humanity. In doing so, we become less than ourselves. Life takes on a feeling of weightlessness, and seems to lose its substance altogether. This despair that is so endemic to life, if we do not have the wisdom to converse with it, turns into nihilism. This, it seems, is what has happened in modernity.

In the forthcoming chapters, we will discuss these various dimensions of meaninglessness and why more people, compared to the past, appear to succumb to this state of despair. This book will address the historical account of the origin of the Meaning Crisis, giving us some sense of what meaning is and why it is so important. In the second book, we will delve further into the scientific study of cognition and the investigation of meaning and meaning making. This study will serve as a basis for recommending practices to better enhance and enact meaning and wisdom in your life. This order is deliberate; cultivating these practices most effectively depends on having a deep understanding of our longstanding relationship with meaning.

When people use this word *meaning*, it is a metaphor. They mean that the way life becomes significant is somehow analogous to the way a sentence has semantic meaning. The pieces fit together in some way that impacts our cognition and connects us to the world. When words become a sentence, we no longer see the words, but see *through* them. They become transparent, and give us access to participate in reality, allowing us a chance to grasp it, to have contact with it. We have to unpack this metaphor. Why do we use it, and

¹² C.G. Jung, *Psychology and Religion*, 1927, 18.

what does it reveal when we talk about the meaning of our lives? How is it that some of the most meaningful experiences people have are precisely the ones that are completely ineffable to them, that they cannot put into words?

To answer that question, we will have to broaden many of our definitions, beginning with the concept of *knowing*. There are different kinds of knowing, different ways in which a human being is able to know. Some of these ways have fallen off our cultural radar in the wake of the Meaning Crisis. When we read the ancients talk about knowing, we think of it now as a special kind of belief, a belief that something is true or false. But there is much more to knowing than having justified true beliefs.¹³ Trapping ourselves in this mode of factuality has made us more susceptible to bullshit and ideology because it has caused us to ignore several dimensions of experience that are essential to being rational. In this book, we will begin to reacquaint ourselves with these other ways of knowing: *knowing how* to catch a baseball, knowing *what it is like* to sit in your room and read this chapter, and *knowing what it means to participate* in a relationship. Consider that your relationship is not something you believe to be true or false. It is something you *believe in*.

These other kinds of knowing, when they are addressed at all, are usually encountered in the therapeutic context. Therapy is another cultural practice that seems to have surged in response to the Meaning Crisis. Many people who seek therapy are trying, among other things, to recover these lost kinds of knowing, to retrieve the kind of insight that can transform them—not just change their beliefs, but change the perspective they take on their lives, the procedure of how they interact with it, the way they participate in themselves. That is why psychedelics can play a key role in therapeutic success; they help reactivate these different kinds of knowing.

Connecting these different elements will give us an account of meaning that allows us to see both its structure and function. What are its cognitive processes? What are its cognitive mechanisms? How do they work? What happens when they cease to work properly? Our historical account of the Meaning Crisis will prepare us for this structural-functional understanding of meaning. The two accounts will inform, constrain and enable one other. From their dialogue, I will endeavor not just to explain this crisis, but to offer a response to it. This book is entitled *Awakening* from the Meaning Crisis; awakening invokes the tradition—and etymology—of Buddhist practice (Buddha means “the awakened one”). But it also invokes the Socratic way of life, and the original purpose of philosophy. I will call upon many traditions of wisdom to educate and prepare us for this task. This book is not simply a diagnostic project, but an attempt to confront this crisis with wisdom—not in some ideological fashion, but in a profoundly transformative and existential manner.

¹³ In the recent history of epistemology, the discipline of philosophy that deals with human knowing, many philosophers have proposed “justified true belief” as a sufficient criterion for knowledge.

There are no simplistic answers to this crisis, and any claim that suggests otherwise should be treated with great suspicion. Awakening from the Meaning Crisis is a complex and difficult undertaking. This is the first of two books that will carefully build our argument for the existence of this crisis, for its interaction with the other crises in our world, and eventually, for the possibility of overcoming it. Throughout, I will maintain a commitment to rational argumentation, and to give proper scholastic credit to other people whose work has contributed to my understanding. I do not—and nobody should—claim to offer you the absolute truth. The Meaning Crisis exceeds the capacity of any one person to fully understand it, and an inquiry like this requires rigor and intellectual integrity. However, this is not an academic book, or an academic project. It is a project for anyone who is drawn to this problem out of a genuine personal and existential interest. So, I will try to keep jargon and technicalities to a minimum. New terms and concepts will be italicized, and carefully explained along the way. You can also use the glossary to assist your reading. I cannot be unbiased; that is not possible. But I will present my viewpoints as methodically as I can to demonstrate the scope of this situation. We cannot just treat the Meaning Crisis as a scientific problem, but we can certainly argue for it in a highly plausible way.

The Upper Paleolithic Transition: The Birth of Humanity

Meaning is such a deep part of our nature that it seems to define, at least in part, what it means to be human in the first place. It plays a formative role in some many of the uniquely human attributes that seem to distinguish us from other species—like language, or religiousness, or even reflective self consciousness. There are so many human endeavors, especially artistic ones, that seem to have no other function than to celebrate our meaning-making abilities. It seems beside the point to ask why the poet writes, or the dancer dances, or why a rock climber puts herself in danger to scale a 1,000 foot cliff.

It is difficult to know where to start. In the words of my colleague, Filip Miscevic, the beginning of meaning is a continuum question. The deep connections between meaning-making and cognition go far back into our evolutionary heritage, well before we were recognizably human. There is no absolute or definitive starting point for this evolution. We simply have to pick a point on the continuum, and decide where the story will start.

We will begin with the *Upper Paleolithic Transition*, which occurred around 40,000 BCE. Many people think of this period as the time when humanity—as we now define it—came into form. While we wouldn’t be able to relate to these ancestors culturally or linguistically, we would nevertheless recognize their kind of humanity as akin to ours, a humanity that is bound up with the same meaning-making characteristics that I have been exploring with you in the previous sections.

There is some controversy about dating Homo sapiens, but conservatively we have existed since at least 200,000 BCE. Around 40,000 BCE there was a radical change within this evolutionary continuum. We have come to call it the Upper Paleolithic Transition. Human beings began doing things they were not doing before. They began to make representational art, like sculptures and cave paintings. We have good evidence to suggest that they also started making music.



Figure 1.1: Example of the representational sculptures made during the Upper Paleolithic Transition. Image obtained from Wikimedia Commons entitled Venus of Willendorf, on display at the Naturhistorisches Museum, Vienna, by Captmondo.

During this transition, human beings seem to have undergone a significant enhancement in cognition. How do we know this? We see the first use of calendars, not with numbers and dates (numeracy had not yet been invented) but with symbolic representations of the phases of the moon and the passage of the days. Human beings were keeping track of time across abstract patterns so they could enhance their hunting abilities. Something else began to happen, intrinsic to our humanity and deceptively important even to our modern nature: they began developing projectile weapons. The Neanderthals, who are contemporaneous with Homo sapiens at this time, did not have long-range weapons. Their spears were thick-shafted, with heavy stone, and they had thrusting tools. We know they got close to their quarry because their remains have bone damage similar to the kind we see in human beings involved in cowboy rodeos, where people contend with large, thrashing mammals.



Figure 1.2: Bone spear heads from the Upper Paleolithic Period. Image obtained from Wikimedia Commons entitled Museum of Prehistory: Paleolithic bone spear heads (25,000 BC) from Wartberg, by Wolfgang Sauber.

The *Homo sapiens* did something different. They started to develop very thin spears, not with stone tips, but with bone tips. Bone is much harder to work with but it is also very light, and more effective as a projectile weapon. The early humans also procure two related inventions: the spear thrower and the sling. They develop the ability to carry multiple missiles at a time and project them over a long distance. These skills require increased development of the frontal lobe area of the brain, which, as we will see, is very important for enhancing intelligence.

We need to abstract for a moment to realize the momentousness of this evolutionary development: think about how deep this idea of *throwing* is in our cognition. Think of a project you are working on—*project*, like throwing to strike a moving target. Or consider the word *object*, which means “thrown against.” *Subject*, meaning “thrown under.” All day long, cognitively, you are throwing at moving targets. This is a deceptively complex task. As the military has discovered, trying to build artificial intelligence to project at moving targets turns out to be a very tall order.

In time, the advent of long range weapons was accompanied by other seminal human *projects*, such as calendrics, music, sculpture, and paintings. Notice how all of these activities are associated with different aspects of *meaning*. They extend our attention into different domains of experience, and multiply our ways of knowing ourselves and our environment. They are playful, explorative, and experimental. They augment the world by repurposing it, turning it into an arena for our imagination. These artistic undertakings have the uncanny effect of discovering part of reality, and appearing to invent it, all at the same time. The ancient Latin term for this, *inventio*, should remind us of our earlier term, realization—bringing some ineffable pattern more directly into our conscious experience, and in doing so, making it more real. If we begin to think of this in relation to this book’s

central “project,” *Awakening*, we can begin to anticipate where this profound human evolution, and indeed this argument, will lead.

It is remarkable to think that the dawning capacity to realize our environment, to change the role we play within it, to develop more participatory relationships with the world, is all awakened by our use of projectile weaponry. This is even more astonishing when we consider how it changed our relationship to fundamental aspects of reality – like time. During this period, time becomes a more distinct entity in our experience, capable of being known, measured, related to in more dynamic ways. It becomes a kind of character. This characterization of time doesn’t just change reality, but it also characterizes us—who we are, what defines us, and what we ought to do with ourselves. In short, our relationship to time becomes meaningful by becoming *symbolic*.

I will explain the connection between meaning and symbols in forthcoming chapters. For now, it is enough to observe that this new human capacity that emerged in the Upper Paleolithic Transition—the capacity to internalize and map movement, to abstract our spatial awareness as a way of representing and reimagining the world—is formative for human cognition, and it is the precursor to our facility for metaphor and symbolic thought. As our early ancestors discovered, it is our capacity to intervene and participate in the world. Through our ability to project ourselves, we somehow became more present in the world, and present to ourselves. The “meaning” of this project was not a principle, but a pattern for relating to life and existence, guided by transformations in our attention. It was a pattern that we realized, lived in, and evolved through. Eventually, our symbolic reinvention of space and time began to reinvent humanity itself.

At this juncture, you may understandably be waiting for a causal explanation. How and why did this seismic change occur? It is impossible to know such a thing definitively, but there has been excellent anthropology devoted to the subject, especially by David Lewis-Williams,¹⁴ Matt Rossano,¹⁵ and Michael Winkelman,¹⁶ trying to explain this radical change in human cognition. It seems evident that sometime before the Upper Paleolithic Transition—between 30,000 BCE and 70,000 BCE—human beings went through a near extinction event. Human population was reduced significantly, maybe to a maximum of 10,000 individuals. The cause of this cataclysm is debatable; it may have been the climatic change of the end of the last Ice Age in Africa, or the existence of a supervolcano that erupted around 70,000 years ago. Whatever the direct cause, there was tremendous pressure put on human populations to adopt different survival strategies. They moved to

¹⁴ See David Lewis-Williams, *Mind in the Cave: Consciousness and the Origins of Art*, 2002.

¹⁵ See Matt Rossano, *Supernatural Selection: How Religion Evolved*, 2010.

¹⁶ See Michael Winkelman, “Shamanism and Cognitive Evolution” in *Cambridge Archeological Journal*, 2002.

the coasts of Africa, and diversified their diet. But the most meaningful response was not technological—the climate inhibited most innovation—but socio-cognitive. These early humans started to create broader trading networks. This helped to reduce some of their vulnerability to environmental variation. It also made them more resourceful—materially, and also in their capacity for discovery.

Forming these broader trading relationships was seminal because it changed the scale at which human cognition could operate. Your cognition is very participatory; you partake in *large, distributed networks of cognition*. Before the internet networked computers together, culture networked brains together to provide some of our most powerful problem solving abilities. This is how human beings responded to an impossible predicament—they formed a social network. These networks were managed with a form of pattern-oriented activity that became so fundamental to human culture that its influence pervades nearly all of our behavior. We call it *ritual*.

Ritual is a deeply complex phenomenon, and I will devote considerable discussion to it in the coming chapters. If you sit at a cafe for a few hours and let your attention wash over the street, you may find yourself marveling at the silent patterns of communal life. Consider, for example, how much time we spend with strangers. It is a rare thing for species to engage or form relationships with other members that are not kin, outside the hunter-gatherer group. This is one of the legacies of the Upper Paleolithic Transition. Our tolerance of strangers distinguishes human beings. Ritual provided the unconscious choreography for engaging with our own species; it allowed us to communicate and foster trust with individuals whom we did not personally know.

This choreography is still present in many of our complex behaviors. We arrange ourselves in an elevator to look in the same direction. We fall into lines at the bus stop. We form circles around street performers. We clink our glasses together to share trust and felicitations. When you meet somebody, you stick out your hand. The other person grips it, and moves it. Many silent signals are exchanged in this evaluative motion: you show that you have no weapons. You allow the person to touch you, to sense tension, to feel if your hands are clammy. The same is true in the familiar refrain, “how are you?” It is a famously trivial question; most of us neither welcome nor offer an honest answer. But the semantic response is incidental. The communication does not consist in what a person says, but how they respond, how they intone their reaction, and how you intone yours. When it seems you are talking about nothing, you are in fact talking about your relationship, subtly negotiating it the same way your hands are measuring and fitting to each others’ grip. Ritual is guiding your interaction without you noticing. It is the groundwater beneath these cultural forms. If you dig into your own behavior, social or otherwise, you will find it. Even when our interactions seem empty, they continue to convey—and convey us through—these patterns

of meaning. In the minutest of gestures, in the smallest of small talk, there are ancient rituals at work.

However simple it might seem, following the choreography of ritual requires more than memory or observation. It requires certain cognitive aptitudes. To engage with you, I need to be able to anticipate your actions. I need to have some sense of how you feel. I need to have some idea of what is going on in your mind. In short, I must be able to take your perspective. If I cannot do that, I am not going to be able to trade with you.

The ability to take the perspective of others also means taking perspectives *on* others, especially those you do not know. To do this, you must develop what Daniel Siegel calls *mindsight*,¹⁷ the ability to gain insight into other people's mental states. As you improve mindsight, you also gain a different kind of access to yourself: reflection and insight into your own mental states. This prototypical form of self-knowledge is the beginning of a development circle; your perspective on yourself perceives and corrects how you take perspectives on others, which in turn affords better mindsight. As this capacity evolves, you begin to take perspective on perspective itself, i.e., know what it *means* to take a perspective. As you may guess, the ability to migrate our attention from first-person perspective to second- and third-person perspectives is critical to the project of *realization*, and also at the origin of processes like *metacognition* and *mindfulness*.

Rituals that acquaint and entrust human beings to one another must also have ways of maintaining that trust. If we had to redraw our relationships every time we traded with a new stranger, it would be difficult to maintain the bond of our distributed networks. Loyalty to one's group was taken for granted when the community was always present. When one begins to interact with strangers, this loyalty is called into question. Strangers present *temptation*. It is a very old motif in our myths. This is why we had trade rituals, rites of initiation designed to bind an individual's commitment to the group, to hold fast against the incursive threats of outsiders. Proportionately, these rituals needed to test and affirm the resolution of the member against the possibility of temptation. Therefore, they often included great risk, threat, and sacrifice. Our initiation rituals now have been tamed, but if you look back in time, they were often traumatic. People were put into situations wherein they might experience tremendous pain, or fear, or even death. If they endured it and came out the other side, they had proven their commitment to the group.

What do these demonstrations mean to a cognitive scientist, and what do they do to the mind? Ritual trains your ability to regulate your emotion, and to undertake a process called *decentering*: adopting a non-egoic perspective by redirecting your attention to something real outside of you. Undertaking a ritual often means placing yourself in the

¹⁷ See Daniel Siegel, *Mindsight: The New Science of Personal Transformation*, 2009.

hands of other people. In the initiation rituals, the entire group is, so to speak, shaking hands with the new member. The third-person perspective of the group becomes the first-person perspective of each participant. The ritual is centered on you, but through the ritual, your attention and identity become centered on the group. This has a tremendous impact on your cognition.

The cognitive enhancements that emerge from these trade and initiation rites seem to produce a third kind of ritual. To understand how this ritual works, I need to introduce a new concept—that of *exaptation*. This concept originated in biology, but the work of cognitive scientist Michael Anderson has repurposed it to show how the brain and cognition operate.¹⁸ This seems fitting, because exaptation in biological terms, is an evolutionary mechanism whereby our natural instruments become repurposed to develop new kinds of functions. For example, I use my tongue to speak, but tongues did not evolve for speech. If they did, your cat or dog may very well be speaking to you.

Why, then, did the tongue evolve? Consider its other properties: it has the flexibility to maneuver food in your mouth, and it contains a constellation of nerve endings with the sensitivity to detect poison. However, because of the way we evolved, this highly sensitive, highly flexible muscle also rests over in the air passageway. Evolution is not an intelligent designer; we use the same passage for breathing as we do for food. Your tongue can therefore interrupt your airflow, and punctuate the sounds that issue from your vocal tract. With these conditions, this tasting muscle was exapted to produce speech. Evolution did not make a speaking machine from scratch; it took something that evolved for one purpose and exapted it for an entirely new one.

According to Anderson and others, this kind of exaptation is exactly what the brain does. The brain will develop a mechanism—a little machine, a set of cognitive processes for doing one thing—and then it will adaptively apply that mechanism to solve some other order of problem. This is what happened in the Upper Paleolithic Transition. The enhanced mental abilities that came out of the adaptive trading and initiation rites were exapted into *shamanic rituals*. The capacity to decenter one's attention, to become aware of one's own cognition, to adopt a foreign perspective... all of these presaged the advent of *shamanism*, a practice for exapting this enhanced mindsight to alter and refine the state of human consciousness, to manipulate our mental and emotional state, to transform the very character of our humanness.

¹⁸ See Michael L. Anderson, "Massive Redeployment, Exaptation, and the Functional Integration of Cognitive Operations" in *Synthese*, 2007.

Anthropologist Michael Winkelman's¹⁹ work shows how historically pervasive shamanic figures are in early hunter-gatherer groups. This historical—or *phylogenetic*—account interacts with a prolific psychological motif. The shaman is the prototypical appearance of an archetypal figure that Carl Jung called the *Magician*, a numinous figure of self-transcendence and transformation, a bridge between the unsteady human ego and the “Self” that is the totality of each individual’s potential. This motif has been endlessly recreated in our cultural myths, notably in the Arthurian figure of Merlin, or in the more recent characters of Gandalf and Yoda. Their presence is associated with luminosity, an elevated consciousness, and a capacity for healing. Shamans were the health care providers of early humanity, and the fonts of wisdom in communal life. If you had a shaman in your midst, it helped to reduce discord, and enhance the hunting abilities of the group. The shamans were believed to have a foothold in the spirit world, from which they could draw otherworldly knowledge and skillfulness. As a naturalist, my prerogative is not to take these beliefs at face value, but to develop a cognitive scientific account of shamanism that makes sense of its excellence and adaptiveness.

By the accounts of Rossano, Winkelman, and Williams among others, the advent of shamanism can plausibly account for the sudden explosion in cognition that took place during the Upper Paleolithic Transition. Critically, this was not a “hardware” change. The human brain had already existed for 160,000 years, and it did not undergo significant physiological changes during the Upper Paleolithic Transition. This was more akin to a software update, an exaptation that changed how human beings *used* their brains. As I will argue in later chapters, shamanism likely played a significant role in that software change.

If shamanism was like a software update, we can conceptualize it as a form of technology for the brain—or a *psychotechnology*. As the cognitive scientist Andy Clark wrote, you are a natural-born cyborg. Your brain has evolved across several species to use and integrate tools into its everyday functionality. When you start using a tool, even for a very short period of time, your brain will begin to model it as part of your body. When you are parking your car, for example, you can sense where the edge of your car is. The car turns invisible; it becomes an extension of your person. This spatial co-identification is also what allows a tool to work so effectively. The same is true of your clothes, which modify your mobility and dexterity through various environments. Your eyeglasses or contact lenses disappear from your vision even while enhancing it. Cutlery, writing implements, weapons, wristwatches—the list goes on. When we add smartphones and Bluetooth technology to this pattern, we see just how penetrative our technology has become, how coextensive it is with our identities and experience. This technologization can become a problem, as Martin Heidegger famously observed, when it monopolizes our mode of participation and turns

¹⁹ See Michael Winkelman, *Shamanism: A Biopsychosocial Paradigm of Consciousness and Healing*, 2010.

the entire world into a tool waiting to be optimized. But there is little doubt that it has made human beings tremendously adaptive.

Yet this is not the end of the story; your ability to internalize a tool can be exapted into a cognitive process, and this is how psychotechnologies become possible. A physical tool fits into your biology, extending its capacity. A psychotechnology fits into your brain and enhances how it operates. To find an example, consider that you are using a psychotechnology right now: literacy. This tool does not come naturally to you. You may have been born linguistic—as Noam Chomsky has argued²⁰—but you were not born literate. In fact, human beings were completely illiterate for most of our history.

Literacy is now so embedded in our culture that it is difficult to account for its many functions. It is a set of tools that standardizes how you process information, and allows you to share, remember, develop and transform that information. I do not have to retain all of my knowledge in mind; I can write it down and return to it later. I can see patterns in it that I didn't see before, and I can adjust and add to it across time. This also means I can see and adjust *myself* across time. I can link my brain to its counterparts in the past and future, and network all of these moments of problem solving together. I can also network my brain with your brain and mutually improve our ability to solve problems. Think of the effect on mindsight, and the distributed networks we discussed above—literacy allows me to know you better, know myself better, and know what it means to know better. It therefore gives me the capacity for what we call *second order thinking*.

The effects of indispensable technologies become most conspicuous in periods of dysfunction or privation. When the electricity grid shorts, or mobile networks lose service, we become aware of how dependent we are on their functionality. This dependency is even more dramatic in the case of psychotechnologies. If I took literacy out of your brain right now, the effect would be catastrophic. Our distributed networks would founder. Your cognitive hardware would be no different, and yet you would experience a profound loss of memory, self-reflection, and cognitive organization. The volume and types of problems you can solve would decrease dramatically. That is what psychotechnologies do: they enhance the software of your cognitive machinery.

Shamanism, as the first psychotechnology, is a kind of anthropological origin story for the project of meaning in life, and therefore also for the meaning crisis. The way it altered our state of consciousness and cognition led to the philosophical and scientific enterprise, the capacity to turn scrutinous inquiry on worldly phenomena, and take a perspective on our existence. We see evidence of sacred and symbolic activity in shamanic cultivation, which continues to be present in human society. Shamans often engaged in

²⁰ See Noam Chomsky, *Language and Mind*, 2006.

sleep deprivation and long, intense periods of singing, dancing, or chanting. The shaman cultivated mimesis (imitation), putting on clothing and masks to take on the character of other figures or animals. Sometimes the shaman would go into periods of social isolation and withdraw into the wilderness. The use of psychedelics, though not necessary, would complement these other practices to help bring about an ASC.

It is quite evident that these ritual enactments were not simply for dramatic effect. The shamans discovered an important connection between cognitive disruptions—breaks in the ordinary continuity of consciousness and physiology—and the capacity for insight. This connection has survived well into the modern world. In his book *Waking from Sleep*, Steve Taylor, a psychology lecturer at Leeds Beckett University, discusses the *disruptive strategies* that people still use to provoke *Awakening Experiences*, and effect transformation in their sense of self and reality. The shaman essentially tried to disrupt the normal ways of detecting patterns in the world. Why would this be useful? The very thing that makes you adaptive also makes you subject to self-deception, just like your use of technology. The ability to pick up patterns is a profound human aptitude, and repeating these patterns allows us to sustain many systems in our culture, including communal ritual. However, if we become locked into these patterns, we risk losing the cognitive flexibility that allowed us to be so adaptive in the first place. Maintaining this flexibility is the purpose of shamanic deprivation, and the disruptive strategies that followed.

There are a few classic experiments in psychology that show how our ability to detect and predict patterns can close a frame around our thinking, and prevent us from solving problems. Perhaps the best and simplest example is the *Nine Dot Problem*, presented below:

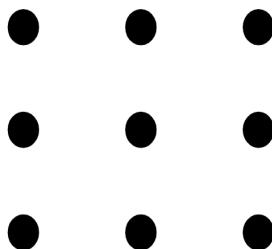


Figure 1.3: The Nine Dot Problem as it is presented to subjects in an experiment. Subjects are told to join all the dots together using four straight lines.

The problem solver is told to join all nine dots with four straight lines, with each new line beginning from the terminus of the previous one. When people see this task, they are relatively confident. The first attempts usually resemble these patterns:

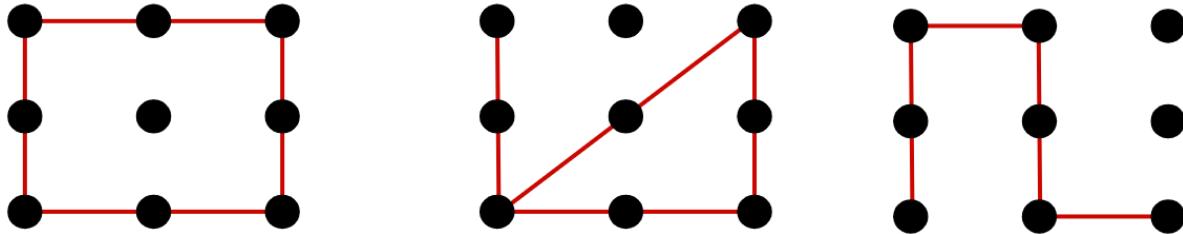


Figure 1.4: Common first attempts to solve the Nine Dot Problem.

After these early attempts, the subjects often become puzzled. A problem that seemed very recognizable turns out to be difficult to solve. However, when someone demonstrates the solution, it seems exceedingly simple:

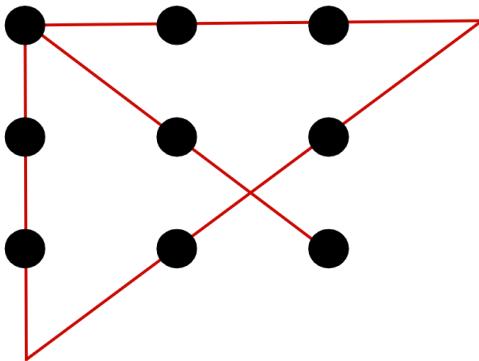


Figure 1.5: The solution to the Nine Dot Problem. Subjects are required to break the frame of the invisible square and extend the lines outside of the square to connect all the dots.

When they are finally shown the solution, the subjects of this experiment become indignant. They will sometimes accuse the solver of cheating, of going *outside the box*. This, in fact, is the origin of our common expression, “think outside the box.” The problem appears insoluble at first because the subjects project a pattern into these nine dots: they project a square. Unconsciously, they engage a set of well-worn skills learned from prior exercises and experiences. When you were a kid, for instance, you would connect the dots to create images, and by following these outlines faithfully, you would refine your craft for geometry and illustration. Yet the square is not an essential or necessary feature of these nine dots—it is a product of how we have *framed* them. Unconsciously, we project a pattern and then activate the appropriate skills. This results in us becoming locked and blocked. To solve the problem, you have to disrupt your framing of it. You must achieve an *insight*.

It is well and good to be told, “be insightful,” but a key finding of the experimental work related to the Nine Dot Problem indicates that telling participants to “think outside the box” does not, in fact, help them to do so. The proposition that a person needs insight does not magically produce it, nor does it change the subject’s relationship to the problem —except perhaps to frustrate it. In addition to this *propositional* knowledge, they need to know *how* to go outside the box; they need the requisite skills of attention and perception to enact the solution. This is what I call *procedural knowing*. Knowing how to go outside the box requires you to change where you stand in relation to the problem, to change how you apply your attention, to change what is salient, important, relevant and real. This emergence of new perspective, facilitated by your procedural knowing, is called *perspectival knowing*. Undergoing an insight is a prototypical example of perspectival knowing.

When one way of knowing is mistaken for another, when we use a proposition to substitute for a procedural intervention, the result is frustration, anxiety, and a feeling of being stuck. The nine dots are a low stakes problem, but they represent a dynamic that can be found at every scale, right up to the Meaning Crisis. This is why *Awakening from the Meaning Crisis* begins with shamanism, this set of attentional practices designed to disrupt everyday framing. These practices are meant to gain insight into patterns in the environment that other people might not be picking up on. When the shaman is enacting the animal, he is not having beliefs about that animal, he is developing mindsight; he is becoming the animal, not metaphysically, but *imaginarily*. The shaman is gathering together a lived sense of the animal’s skills, the kind of perspective the animal has, the way the animal thinks, and the kind of world it lives in. By becoming the animal, by having this *participatory knowing* of what it is to be the animal, the shaman enhances his ability to track it, to find it, and when he hunts it, to strike it true.

Participatory knowing allows the shaman to combine many attributes that, in the modern epoch, are sequestered into separate roles and offices. The shaman is antecedent to the sage, highly charismatic and multifarious. Imagine combining a prodigious rock star, therapist, and artist into one individual, and being visited by this individual when you are sick and indisposed. The shaman does not simply mete out advice, but induces changes in your participatory, perspectival and procedural knowing. Their presence can therefore enhance your ability to trigger your own placebo effect.²¹ All medication has to surpass the placebo effect in order to be considered real and efficacious. In the absence of modern pharmacology, an individual that can trigger this effect is the best possible advantage for a community. It is little wonder that the potency of the shaman elicits belief in magical ability.

²¹For further reading on the placebo effect, see Norman Doige, *The Brain's Way of Healing: Remarkable Discoveries and Recoveries from the Frontiers of Neuroplasticity*, 2016.

It is important not to understand the shaman's pretense of magical ability as a form of charlatanism. This would be an anachronistic mistake. The shamans are not trying to pretend at knowledge they do not possess. They are engaging in a process of *realization*: playing with meaning, recasting perspective, enacting a role to access insights that were previously inaccessible. There is great pragmatism to this cognitive strategy. In the next chapter, we will talk more about what the shamans are doing, how they are enhancing their cognition, and why this played such an important role in transforming human beings into the kind of meaning makers we are. The word *shaman* means one who *knows*, one who *sees*, one who has *insight*. The shaman is the "wizard," the wise person.

You may see now how we are going to proceed. If we are to awaken from the meaning crisis, we need the tutelage of ritual, of psychotechnologies, of all our ways of knowing. This journey will lead us back—and forward—to the tradition of wisdom cultivation that the Greeks called *philia sophia*. Like the shaman, we must reunite roles that have become estranged across time, and disabuse ourselves of many modern conceits: the idea that knowing is separate from virtue, that a naturalistic worldview cannot include sacredness, that myths and symbols are set apart from reality. To do this, we need to venture outside the imagined frame that keeps the nine dots captive in their square, static formation. As we continue on our journey, we will need to gather a cognitive account of the human being that supports a new understanding of meaning. To accomplish this, we need the companionship of both science and the sage.

Chapter 2: Flow, Metaphor and the Axial Revolution

In the previous chapter, we began to examine the historical origin of our human capacity for meaning. We explored connections between early ritual and the evolution that took place in the Upper Paleolithic Transition. We discussed how these prototypical forms of human networking did not result from biological change, but from radical transformations in how human beings were using their cognition. It seems likely that this evolution was made possible by the advent of psychotechnologies, distributed systems of identification, communication or representation that became prostheses for the brain, enhancing the scope and function of human cognition. Shamanism was a set of psychotechnologies for altering states of consciousness that could cognitively exapt the enhanced abilities created by trade rituals, initiation rituals and healing rituals.

The Flow State

As I have described, the shamans' disruptive strategies could alter their framing of reality; "framing" is the source of our adaptability—our ability to detect and track patterns—but it makes us maladaptive when we misframe reality, and become locked into patterns of perception that ignore significant details. When this occurs, we need a moment of insight to break the maladaptive frame, like going "outside the box" of the Nine Dot Problem. Attaining these moments of insight depends on our ability to cultivate kinds of knowing that are independent from mere statements of belief: knowing *how to do something*, knowing *what it is like to have a certain perspective* and what it is to know something by *identifying with it and participating in it*. The shaman's Altered State of Consciousness allowed for these different kinds of knowing to become more integrated, and the consequent insight improved the shaman's ability to innovate hunting and healthcare, two activities that would radically improve human survival.

Typically, the shaman would provoke an altered state by undertaking practices that effect dramatic changes in attention and in the way the brain is operating. These activities—which included sleep deprivation, sex deprivation, social isolation, the use of psychedelics, and extended chanting and dancing—created conditions that induced the *Flow State*, a mode of heightened attention and performance that increases our general competence and problem solving. As I described in the previous chapter, the flow state was first made famous in the work of Mihaly Csikszentmihalyi.²² People often describe it as "being in the zone." The flow state occurs when the demands of the situation slightly exceed your skill level, provoking an intense form of focus that allows for more cognitive flexibility in the way

²² See Mihaly Csikszentmihalyi, *Finding Flow: The Psychology of Engagement with Everyday Life*, 1998.

you detect and track patterns. Csikszentmihalyi often represents this dynamic as the *flow channel*.

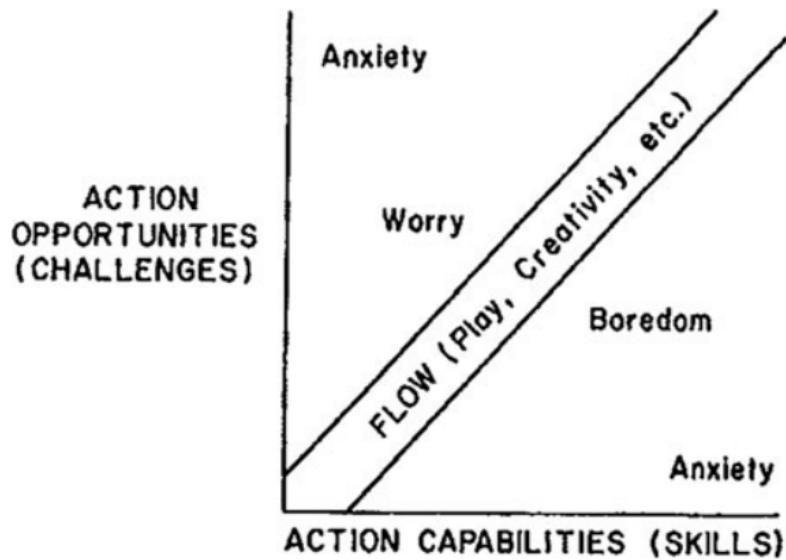


Figure 2.1: This figure depicting the flow channel was taken from *Flow and the Foundations of Positive Psychology: The Collected Works of Mihaly Csikszentmihalyi*, chapter 10. According to Csikszentmihalyi, when the level of challenge or degree of difficulty (represented by the vertical axis) is far greater than the individual's capabilities (represented by the horizontal axis), the individual experiences anxiety. When the level of challenge is greater than an individual's skill set, but to a lesser extent, the individual experiences worry. Conversely, if our skills slightly exceed the challenge of the task, we experience boredom, and when our skills are far greater than the challenge of the task, we experience anxiety.²³

In order to get into the flow channel, I must extend myself to meet the demands of a task that slightly exceeds my capacity. This requires me, through insight, to restructure my attention and change something about the way I am approaching the problem. This restructuring may be prolonged and methodical, or sudden and spontaneous. Either way, it requires me to put everything I have into the task. If my skills exceed the demands, I lapse into boredom. If the demands exceed my skills, I lapse into anxiety. The key to the flow state is a dynamic coupling between the individual and the environment, and a close feedback loop running between them; as your skills improve, your environment responds, and yields additional pathways and opportunities for action.

²³ There might be a phenomenological confusion in this account. Instead of anxiety, Csikszentmihalyi might be referring to a kind of deep existential ennui, or sense of futility, somewhat like what Camus talks about in *The Myth of Sisyphus* as a confrontation with absurdity.

Now that we have outlined the conditions for flow, it becomes clear that the flow state is not the result of some mysterious alchemy; we can consciously reverse engineer those conditions that activate it. Shamanic rituals, with their various deprivation and feats of danger, are designed to do just that. While most of these rituals have faded from popular practice, elements of them remain in athletics, the arts, and in ascetic religious traditions. There are many activities we undertake precisely to get into flow. We dance, play jazz, or practice martial arts. Consider an activity like rock climbing: you climb precariously up a vertical rock face. The task is extremely physically demanding. It carries the risk of injury, exhaustion, and even death. Once you get to the top, you come back down, and eventually repeat the climb. This exercise might seem like a Sysiphean torture were it not for the experience it conduces. Experienced rock climbers attain a very profound flow state. This is not the same thing as physical pleasure, but it is a deeply positive experience, a sense of connectedness to the world and to oneself that makes a person feel somehow more alive, more present to existence. It seems to silence the nattering voices of discontent that are often intruding in everyday moments of waking consciousness.

Even in the absence of a climbing wall, our culture has created flow induction machines that produce this state very reliably: systems of interactive problem solving whereby your skills must constantly improve to meet the demands of an environment whose level of difficulty is steadily escalating. These flow induction machines are immersive and participatory. They require an individual to change identities to fit into an augmented world, take on a character's perspective, acquire a depth of procedural know-how to perform many different skills in conjunction, all within a mythic structure that dramatizes the shaman's facility in hunting, healing and projectile weaponry. In these systems, there is a clear, tight feedback loop between what you do as a character and how the environment responds. Though it does not carry the peril of scaling a vertical cliff, it simulates similar stakes; if you fail, your character will die.

You may have realized that I am talking about video games. Game consoles are among our most reliable tools for inducing the flow state, and this accounts (at least in part) for why they are so absorbing, often in spite of their users.²⁴ Any activity or substance that engenders the flow state can become addictive, precisely because addictions run off the same cognitive machinery that makes us evolutionarily adaptive.²⁵ For the same reason, the

²⁴ Consequently, video gaming is now recognized as an addiction by the World Health Organization.

²⁵ For more information on addictions, see chapter 13.

flow state seems significantly connected to our experience of meaning in life. The more often you get into the flow state, the more likely you are to consider your life meaningful.²⁶

The flow state appears universal. It is experienced by people across cultures, in all kinds of socio-economic groups, genders, languages, environments and age groups. In every case, it is described in almost exactly the same way. Universals are important in cognitive science. We pay close attention to them because they yield important insights into the nature of our cognitive machinery and our evolutionary history. Understanding the flow state leads us back to shamanism, but it also helps us understand many timeless human experiences that are otherwise difficult to describe. When you are in the flow state, you feel deeply at one with things, as though you are being acted upon by an outside force that lends timing and fluidity to your movements. I am a martial artist, and when I am sparring, I feel a sense of connectedness to my opponent, a heightened spontaneity, readiness and anticipation of his movement. When his strike comes towards me, my hand rises to block it without any conscious or premeditated thought. The block simply *flows* out of me. The same thing happens to a hockey goaltender as her glove hand darts out to meet an oncoming puck. Each sport has an equivalent kind of excellence that corresponds to the flow state. There is a tremendous sense of *at-onement*. Time appears to slow down, and the world seems more vulnerable and receptive to your actions. At one level, you are aware—like the shaman dancing or chanting—that there is tremendous metabolic energy being spent. But on another level, the flow feels effortless.

It is not simply time that seems to change in the flow state. It is also your presence and sense of self. When people are in the flow state, their self-consciousness disappears into the background. This doesn't mean that they become oblivious or obtuse, but they are temporarily relieved of that nattering, autobiographical voice that is constantly evaluating their presentation: *How is my day going? How am I doing? Who am I? What am I doing? How am I perceived? How do I look? What are people thinking of me? How am I doing? Am I under threat?* The presence of that authorial voice—though important for its own reasons—can overstay its usefulness. It can keep you at a distance from the world, interrupt your focus, elide the quality of attention you bring to bear on your activities. In depressive states, this kind of rumination can be paralytic, but in the flow state, it retreats into the margins of your concentration. The flow state brings salience to experience, a certain intensity to the world, a brightness and vividness you might associate with a video game. It draws forth your attention, and begets your participation. The flow state is rewarding not simply because it is enjoyable and stimulating, but because it creates the conditions wherein people do their

²⁶ See research by King, Hicks, Krull & Del Gaiso, "Positive Affect and the Experience of Meaning in Life," in *Journal of Personality and Social Psychology*, 2006; Kashdan & Steger, "Stability and specificity of meaning in life and life satisfaction over one year" in *Journal of Happiness Studies*, 2007.

best work. It excels our performance, whether that performance be physical or cerebral, athletic or artistic. That is why it motivates us to seek and cultivate it.

Understanding this excellence requires an account of flow that includes its cognitive functions and properties. In 2018, I published work with Arianne Herrera-Bennett and Leo Ferraro undertaking precisely this study.²⁷ Csikszentmihalyi understood that the flow state requires very specific environmental conditions. Skills and demand must be matched. A tight coupling must occur between you and your environment. Information must be clear and legible, and the stakes must be consequential. In other words, failure must be costly: a fall from the rockface, shame before an audience, or defeat at the hands of an opponent. Csikszentmihalyi observed, as I and my co-authors did, that certain kinds of training, like mindfulness, help people to confront these conditions more forthrightly by managing their responses to stress and anxiety, and produce the flow state more reliably.

Given its central role in ritual and shamanic practice, a unified explanation for flow can help us interpret the prototypical forms of meaning-making. Our project is to account both for its phenomenology—the felt character of its experience—and the measurable effects it has on our cognition. We must understand what it felt like to the shaman, what made his consciousness so submersible, and what was happening to him in terms that are appreciable to a scientific instrument. Recall that the patterns you frame and find in the world are not just patterns in your mind. They are more like sensible impressions of a relationship you negotiate with your experience, a handshake with the world that adapts its grip from one moment to the next. Consider the rock climber again: if your ability to see patterns breaks down while scaling a cliff, you reach an impasse, a physical and cognitive stuckness. If you want to recover, you must refresh the framing that led to the impasse. You have to train yourself to break the frame, restructure your attention, change what you are finding relevant, and then change *yourself* to fit the new relationship. Then, you refit yourself to the rock face. You do this again and again to avoid getting stuck. Jazz musicians practice the same game with their instruments; they pick up a pattern, play with it, but do not remain with it. They shift and restructure their play continuously. They refresh it again and again.

When they activate the flow state, the rock climber, the jazz musician, and the martial artist all become more adept at detecting, playing, breaking, and regathering patterns in their environment. This dexterity of attention gives them insight, and therefore access to new actions. It is important to remember that the “aha!” of insight is not only a cerebral event, but also a metabolic one. That is why we represent it pictorially with a lightbulb overhead;

²⁷ See Vervaeke, Ferraro & Herrera-Bennett, “Flow as Spontaneous Thought: Insight and Implicit Learning” in *The Oxford Handbook of Spontaneous Thought*, 2018.

it illuminates (gives intelligibility) and energizes (adds force) at the same time. Imagine taking that single “Aha!” moment and extending it through time: one insight leads to another insight, which leads to another insight, which leads to another. The process begins to cascade. The more you flow, the more you are training your ability to read and reread your environment, to develop a discerning relationship with it just as you would another person. By this analogy, the shaman’s flow is a communion with the world, socially and ecologically. The world is more legible to the shaman. It is therefore more real, and more vulnerable to his touch.

Intuition and Implicit Learning

There is something else going on in flow that is just as important as the insight cascade. It has to do with your capacity for *implicit learning*, a concept refined in the 1960s by Arthur Reber, among others. Reber was trying to understand how people learn language, and he designed an experiment that showed how human beings could detect subtle patterns beneath their conscious recognition.²⁸ First, Reber generated an arbitrary set of rules for linking strings of letters and numbers together (for example, one rule may stipulate that you cannot have more than three vowels in a row). Then, he generated letter strings according to these rules, which were approximately eight or nine letters long. Each string had to be long enough that participants in the experiment could not easily hold it in *working memory*. The first part of the experiment consisted of showing participants multiple eight or nine letter strings, one after another, all of which followed the arbitrary rules. In the second part of the experiment, participants were shown two kinds of letter strings: one that complied with the first set of rules, and one that followed a new, second set of rules. These two kinds of strings were mixed together. Participants were asked to identify whether or not the strings shown in the second part of the experiment corresponded to the strings they were shown in the first part of the experiment.

²⁸ See Arthur S. Reber, “Implicit Learning and Tacit Knowledge,” in *Journal of Experimental Psychology: General*, 1989.

- 1)** Show subjects multiple strings of 8 letters which follow [arbitrary rules](#)

LQERTTYI

- 2)** Show subjects multiple strings of 8 letters which fall into two groups:

A) Those that follow the initial [arbitrary rules](#)

MWERTTJI

PUIKLMNL

B) Those that follow [different rules](#)

Ask subjects to identify whether or not each string of letters belongs with the ones shown in part 1.

Figure 2.2: A schematic outlining Reber's experiment.

Originally, Reber hypothesized that, because they were generated so randomly, people would not be able to tell the difference between these two sets of strings. However, he found that the participants in the experiment scored well above chance. They could reliably identify which strings in the second part of the experiment corresponded to the strings shown in the first part. When the participants were asked how they did it, the answers varied. They simply had a feeling, guessed at random, or offered a rule they felt had helped discriminate between the strings. In each case, their rule was incorrect, and could not have been used to predict their success.

Without knowing it, these participants were demonstrating implicit learning. Reber's experiment uncovered an unconscious capacity to pick up on very complex patterns in the environment, and this capacity seems to account for certain feats of human perception that are usually thought to be uncanny or mysterious, like those associated with psychic abilities. Many people, for instance, report feeling a curious sensation when someone is watching them from behind their back, and claim to perceive the action even in the absence of sensory confirmation. A different experiment²⁹ explored this sensation: participants were put in the center of a room and deprived of sensory input (e.g., blindfold, ear plugs,

²⁹ See Lobach & Bierman, "The invisible gaze: Three attempts to replicate Sheldrake's staring effects," in The Parapsychological Association Convention, 2004, and Colwell, J., Schröder, S., & Sladen, D, "The ability to detect unseen staring: A literature review and empirical tests" in *British Journal of Psychology*, 2000.

and a scent-free environment). Various people would enter the room and stare at the participants without them knowing. The person in the center of the room had to guess whether or not someone was staring at them. Remarkably, the participants were able to report the correct answer well above probability.

This extrasensory perception seemed miraculous until a modification was made to the experiment. The first time the experimenter brought people into the room, researchers would tell the participants whether or not their guesses were correct. This feedback turned out to be decisive for the outcome. The researchers thought they were introducing people into the room randomly, but as it turns out, it is very difficult to randomize our behavior. We act in patterns without realizing it, and unbeknownst to the researchers, they were actually introducing people into the room in a complex pattern. The person that was blindfolded and ear-plugged was implicitly learning the pattern based on the feedback they were given. When the feedback was withdrawn, the performance dropped to chance.

Our tacit ability to detect complex patterns is what we often refer to as *intuition*. Robin M. Hogarth makes this argument in his book entitled *Educating Intuition*.³⁰ Intuition is real, but not magical. It is the result of your implicit learning. Recall our discussion of everyday rituals from the previous chapter, those unspoken formations that govern social norms; you know how far to stand from somebody, where you should stand, and how to reposition yourself as the conversation changes. If I were to ask you how you know this, you would not likely have an answer. When we encounter someone who seems not to follow these patterns, who stands too close, or does not adjust for the proper space, we usually become uncomfortable, or even defensive.

As a ritual form of perception, our implicit learning is a powerful cognitive instrument. However, it is not infallible. When it fails to adapt, it can lead us astray. This is why, as Hogarth points out, we have two different terms for talking about implicit learning, each with a different connotation. When it is revealing the most relevant and useful patterns and gives us access to insight, we call it *intuition*. When our implicit learning locks us into the frame problem and inhibits our insight, we call it *bias*. We can track the wrong kind of pattern, or confuse one kind for another. For instance, there are two kinds of patterns in your environment: correlational patterns and causal patterns. *Correlations* merely refer to a relationship between two factors. Take the following statement: the bigger your wedding, the longer your marriage is likely to last. This statement is statistically true, yet one would be a fool to think you should stage a larger wedding to create a longer marriage. Bigger weddings *predict* longer marriages, they do not cause them; they reflect a bigger social

³⁰ See Robin M. Hogarth, *Educating Intuition*, 2010.

network and more financial resources, both of which are factors that actually cause a marriage to last longer.

There are many patterns in the world that are illusory because they are only *correlational*, not *causal*. When training intuition, you want to train your implicit learning to pick up on the causal patterns that are real, rather than the correlational patterns that are illusory. This is more difficult than it may seem. These real patterns are elusive to our conscious attention, and they do not avail themselves simply because we look for them. Recall Reber's experiment: if the participants looking at the letter strings were instructed to figure out the rules consciously and deliberately, their performance would not improve—it would worsen. By definition, we cannot replace implicit learning with explicit learning; implicitness is key to its form and function. Explicit learning is aware, and directed to a purpose. Cultivating our implicit learning instead depends on setting up the right context, selecting and arranging the environmental factors to make causal patterns more salient. You do not force the process, but condition it, and conduct it. You do not get into the flow state by screwing up your concentration, but by matching effort, activity and attitude. To use an ancient analogy: you can set the logs and lay the kindling, but you cannot create a self-sustaining fire by force of will.

How, then, do we cultivate implicit learning, and distinguish causal patterns from correlational ones? Much the way we do experimental science, as Hogarth reminds us. We set up an environmental situation, and make sure everything is clearly measured. We track the change in one variable to see if it is closely followed by a change in another variable. If I change your drug dosage, do your symptoms improve? I look for clear information and clear feedback. Error and failure matter in science; disconfirmation has to be possible when testing a hypothesis, and also when training implicit learning. We must put ourselves in a situation where we have access to clear feedback, and where there is a tight coupling between what you do and how the environment responds. Hogarth says that we should try to practice implicit learning in these kinds of contexts.

In our 2018 study, Herrera-Bennett, Ferraro and I argued that the very criteria that develop good implicit learning are exactly the conditions for flow: clear information, tightly coupled feedback, and the relevance of failure. These factors provide a much greater chance that the implicit learning machinery will pick up on complex causal patterns rather than correlational ones. The shaman is harnessing these exact conditions for flow, and something very interesting is happening at the level of his intuition: the insight cascade and the enhanced implicit learning are reinforcing each other. Insight moves cognition to explore new patterns, and the implicit learning picks up on those new patterns. This enhances the shaman's ability to restructure his frame of attention and continually ratchet his skills. This is certainly someone you will want to have around.

It is important to understand that these insights are not related to words or beliefs. The shaman does not know how she is getting these insights and information. Getting into the flow state is almost like a mystical experience, a powerful Altered State of Consciousness. As the shaman moves to enact the animal, she experiences a radical sense of at-onement with the world, and she loses her sense of self in the mimetic exercise. The animal's way of moving, seeing and thinking—in short, the new identity—gives the shaman access to new ways of perceiving and interacting with the tribe. This allows her to trigger the placebo effect, and to alter her tribe's sense of identity through singing, dancing and storytelling.

The World of Metaphor

The work of Michael Winkelman and Matt Rossano has shown that the shaman's flow is a significant part of what powered the Upper Paleolithic Transition. The Altered State of Consciousness creates a kind of dialogue within the brain, especially during a massive disruption strategy like fasting, social isolation or the influence of psychedelics. If you look at a brain scan of somebody who is having a psychedelic experience, areas of the brain that normally do not talk to each other are talking to each other. We take this for granted now, this ability to coordinate our brain, to bridge areas within ourselves and connect the world through insight. We depend on it so comprehensively that it is easy to dismiss it as a normal part of our cognition. Now, we call it *metaphor*.

The word metaphor is itself a metaphor. It means to bridge, to carry over, to connect things that are normally not connected. Remember our word *project* from the previous chapter. Reflect on it. Now, notice the word “reflect” is also a metaphor. Do you *see* what I am saying? Do you *get* my point? Can you *grasp* it? I hope the exercise is not too *hard* to undertake. These statements are all metaphors. Take the following sentence: the weather *feels moody* as you *have* your breakfast, *wondering* how to *broach a delicate topic on the way* to work with a colleague who is *touchy* about *taking* your criticism. Our phrases are composed of these molecular metaphoric compounds. Even the most rigorous analytical thinker does not speak literally. The psychotechnology of metaphor is as pervasive as it is profound, and it is so essential to our thinking as to be invisible in our everyday language. To use Heraclitus's words, metaphor is a hidden harmony that undergirds our speech. As you read on, you will encounter tacit metaphors over and over again. As I will explain in later chapters, learning to dwell in the poesis of these metaphors allows us to participate more deeply in the texts we read, to play and participate in this harmony, and to open new ways of understanding its meaning.

There have now been many studies of metaphor, most famously by Lakoff and Johnson.³¹ Most of these studies converge on the idea that our cognition functions in large part through metaphorical enhancement. The power of metaphor lies in its poetic capacity to create connections between ideas, to fit things together that did not originally belong together. When two independent domains of thought or experience are made to belong together, they create a kind of third identity, a new region of imagination that expresses and explores parts of our experience that were not expressible or explorable. As I explained in the previous chapter, this is why we describe the shaman's world as *imaginal*; it is a way to create and discover at the same time, such that creation and discovery seem like identical acts. As with flow, metaphor is a way of reaching into the world so that it seems to reach back. The word *inventio* becomes useful again here, because metaphor is an instrument for both intelligibility and realization, and thus at the heart of both science and art. As the shaman prototyped this machinery, he was teaching his brain how to relate to itself, how to talk to itself. Metaphor puts parts together to make a new whole, but it also allows a whole —e.g., the brain—to relate its own parts. These parts now belong more with one another, and so the shaman seems to belong more in himself. Metaphor plays a decisive role in how we gather ourselves together, gather to the world, gather the world to order. There is a deep connection, therefore, between metaphorical thought and insight—your ability to solve problems. When someone is facing a problem and they need to restructure their perspective, we often tell them to use an analogy, to keep one foot inside the problem frame while stepping tentatively outside of it. By joining domains together, we come upon a covert likeness between things, a new pattern, an instance of “hidden harmony” we can use to retune our perspective and mode of participation. This retuning has the effect not simply of solving a problem, but changing its relevance entirely. The world somehow transforms by effect of the metaphor or symbol; a new entity or idea is carried into consciousness by the novel compound of identities.

Metaphor is a carrier of insight and intuition, generated by the shaman's inventive consciousness, trained in the psychotechnology of flow, ritual and his Altered States of Consciousness. Through metaphor, the shaman wed various features of the world into new participatory relationships, and she found ways of codifying these relationships in concrete tools—objects that could contain and re-present her insight. She inscribed a piece of bone to track the movements of the moon, or carved a figurine to personify fertility. These creations are not simply works of art, but the human hand extending itself symbolically into complex patterns—harmonies—that are too hidden to be described, and must somehow be enacted in order to be known. With this, we can begin to see the emergence of our prevailing theme: the shaman is literally—or rather, metaphorically—making more

³¹ I have some criticisms of some of Lakoff and Johnson's theory, and I have published work of my own on this subject (Liu & Kennedy, 1997; Vervaeke & Kennedy 1996; Vervaeke & Kennedy, 2004).

meaning, not arbitrarily, but in an intimate and evolving dialogue with reality. It is little wonder that hunter-gatherer groups with a shaman in tow could outperform their competitors, or why these technologies have become so universal; they exapt some of our most basic cognitive machinery and enhance it in a remarkably powerful way.

The shaman's meaning-making power yielded access to an uncanny array of experiences. These experiences redrew the boundaries of human potential, and make the psychic feats of modern intuition—like knowing when you're being watched—seem mild by comparison. One of the most transformative of these experiences was *soulflight*, an out-of-body sensation of traveling to another world. This ancient phenomenon is the origin of a common metaphor: "getting high." The shaman experienced himself as flying above the world, not in a dissociated dream, but in waking, conscious reality. How would the brain generate such an experience? This is where the imaginal world of metaphor, ratcheted by the flow state, stimulated by disruptive strategies and psychedelics, unfolds into a kind of immersive myth, a symbolic arena for the shaman's insight. The shaman is acquiring a more comprehensive grasp of complex patterns, but his experience is mostly intuitive. Where are you when you seem to get a bigger picture of things? You are above them. We often use the term *oversight*. Somebody who oversees has *supervision*. Consider these two metaphors closely; they are the distant echoes of shamanic flight. The shaman's insight earns him his role as the overseer of the group. As the maker of meaning, his authority mediates the relationship between seen and unseen realities.

The Bronze Age, the Dark Age, and the Axial Revolution

With the Upper Paleolithic Transition—the exaptation of our meaning-making machinery through flow and ritual, altered states of consciousness, and the self-transcendence of soulflight—we see the emergence of a prototypical spirituality, and the beginnings of religiousness and wisdom cultivation. These transformations were irrigated, so to speak, by another sprawling change that took place around 10,000 BCE—the *Neolithic Revolution*. The Neolithic Revolution brought the invention of agriculture. This was a profound apparatus for supporting complex structures and societies. For the first time, populations could stay in one place for significant amounts of time, and develop long-form and lasting relationships to their environment. This also meant they could develop more lasting relationships with one another, and larger groups of strangers expanded ritual to more complex scales. This became the ancient world we recognize; as stone gave way to metal, the Bronze Age came into existence, along with the first great civilizations in Mesopotamia and Egypt.

The Bronze Age inherited and developed all of the important shamanic features of the Upper Paleolithic Transition. This new world lasted for a very long time, but our connection

to it is somehow distant. If I were to ask: have you read anything from the Bronze Age? Have you read the Epic of Gilgamesh, or the Egyptian Book of the Dead? The Sumerian, Mesopotamian and Egyptian civilizations were colossal in their scale and influence, but most of us have not retained a direct relationship to their mythology. Alternatively, if I ask the same question of the Bible, or Plato, or the teachings of the Buddha, chances are you have read them, or at least assimilated a relationship to them. We somehow feel that these figures are relevant to us in a way that the Bronze Age figures are not. We don't see ourselves in the Bronze Age; there is a discontinuity of identity between the kind of human beings we are now, and the kind of human beings we observe in these earlier incarnations of our species.

Our distance from the Bronze Age is not just measured by time. There appears to have been another great change in the human complexion, comparable to the one that took place in the Upper Paleolithic Transition. Between 800 and 300 BCE, there was a seismic shift in human cognitive activity, and this change seems responsible for introducing many of the ideas, beliefs and value systems that define modern humanity. In *The Origin and Goal of History*, the philosopher Karl Jaspers referred to this period as the *Axial Age*. Karen Armstrong has since made the term famous with her own book, *The Great Transformation*. The Axial Age is a decisive time in the development of human meaning, and the project of explaining the Meaning Crisis depends largely on how we understand our relationship with its legacy. The canvas of human civilization was threaded by this transformation: our concepts of what is real, of what is good, of who we are, and how we ought to be. Though refracted through many traditions, the forms of the Axial Age persist, and we share an identity with them and their luminaries that we do not share with the Bronze Age.

The causes of the Axial Age are a matter of debate, but any account must begin with the collapse of the Bronze Age in approximately 1200 BCE.³² There are many different theories about why this collapse occurred—the failure of general systems, or changes in chariot warfare and military technology. For our purposes, the cause of this event is far less relevant than its gravity; it was the greatest collapse in civilization the world has ever known. Trade ceased, literacy was lost, cities faded from existence, and more cultures disappeared than any other time in recorded history. This was the closest thing to an apocalypse that humankind has ever experienced: an end to the world as we knew it.

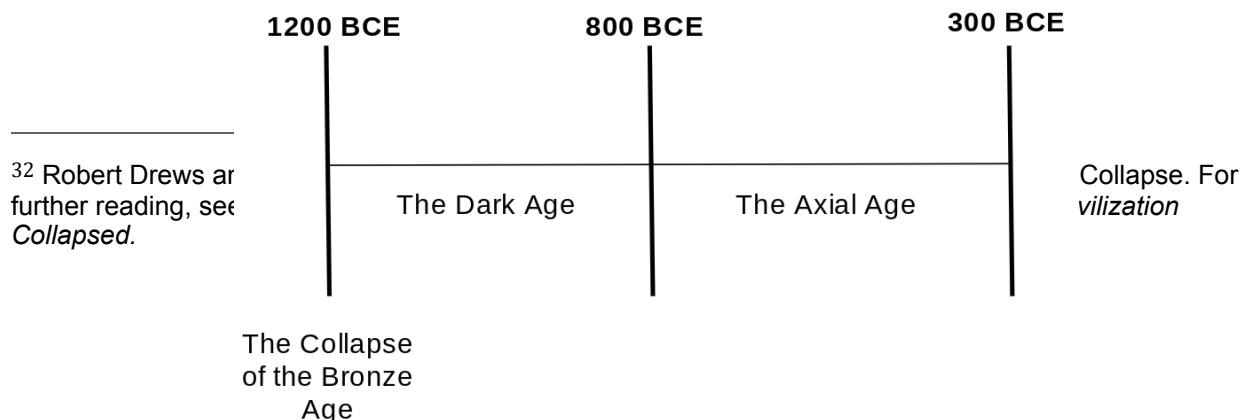


Figure 2.3: A timeline outlining the collapse of the Bronze Age, the Dark Age and the Axial Age.

It is difficult to imagine the scope of this collapse. The Egyptian and Mesopotamian Empires were vast and titanic. They lasted for centuries. Then, all of a sudden, they disappeared. We might compare this event to the extinction of the dinosaurs; their departure allowed for many smaller mammals to evolve. When these dinosaur empires passed out of existence, they left many straggling, small-scale societies clinging to survival. This diffuse cultural vacuum became known as *The Dark Age*, a time which placed a great adaptive demand on human cognition, and resembled the kind of bottleneck that preceded the Upper Paleolithic Transition in Africa. Once again, human beings were now more willing to experiment, to try new forms of social organization. They began inventing new psychotechnologies, standardized ways of processing information, new rituals and practices that could improve cognition by linking brains together.

One of these new psychotechnologies emerged in the land of Canaan, the region of Palestine that is now modern Israel and Jordan. Here was the birthplace of alphabetic literacy. The Bronze Age empires already had idiographic literacy; the Egyptians had hieroglyphics and the Sumerians had cuneiform. However, these forms were very difficult to learn, and they required extensive study and skill to use effectively. Literacy was a distinguished profession in the ancient world because it was so rare and valuable. It was not easy to learn, nor to transmit.

Alphabetic literacy was more powerful because it was learnable. This much was evidenced by its rapid transmission across the region. After emerging in Canaan, it was adopted by Phoenicians, who conferred it to the Greeks. From there, the Canaanite alphabet merged imperceptibly into archaic Hebrew. It spread like a fire, alighting from place to place. In the previous chapter, I explained how literacy enhances cognition, and with alphabetic literacy the quality of this enhancement is magnified by its dissemination. When more people learn it, its capacity to transform cognition operates at a new scale, and it turns into a tool for transforming culture. Literacy has a profound effect on your sense of self. Human beings have a natural capacity for metacognition, an awareness of our own minds. By bringing

attention to your thinking, you can observe its patterns. You can reflect on whether you have a good memory, or where your thoughts appear to stray. Alphabetic literacy, when we internalize it, becomes a powerful prosthetic for this reflective activity. I can record my thoughts, reflect on them, and become aware of them. Most importantly, I can correct them. Literacy allows me to extend my thinking beyond my memory, to externalize it and examine it. Through literacy, human beings acquire a sapiential ability that sociologist Robert Bellah calls *second order thinking*.³³

There was another powerful psychotechnology emerging at this time, another profound catalyst for disseminating and transforming culture: *coinage*. There were many roving armies during this period as societies competed and rebuilt, most famously the Assyrian Empire in the Middle East. These itinerant conditions required an agile form of commerce, a more transmissible means of conveying resources. Coinage became a practical physical technology, but its enduring legacy—especially in our time of coinless and paperless transactions—is its representational nature. Money is a semiotic entity: something that stands for something else. The use of money taught human beings to think and function in abstraction, in systems of signs and symbols. It also gave us something else of inestimable value: *numeracy*. We were required to think arithmetically, to use abstract and logically rigorous thought for practical purposes. Once again, these skills became candidates for exaptation, the repurposing of one capacity to meet a novel cognitive demand. The psychotechnologies of alphabetic literacy and coinage trained our capacity for representation, which exapted into second order thinking. Our second order thinking was then exapted to serve many feats of engineering and erudition, and distributed itself into sprawling projects of civilization-building.

These psychotechnologies were the building blocks of the Axial Revolution. If we connect their two greatest endowments together—second order thinking and symbolic, logically rigorous thought—we find humanity regathering itself into a new form of humanness. It was a rebirth of our cognition, a *re-inventio*. The ability to correct that cognition gave us access to self-transcendence. We became aware of self-deception. We could invoke the shaman's ability to break the frame of an ill-adapted pattern, and apply insight to our representational thinking. Human beings could search themselves for error, find fallibility in perception and belief—not just in a moment, but also over time. This realization changed the dimensions of the human *project*. In culture, it allowed for more deliberate progression across time. However, it also revealed something about the nature of mind that altered our sense of self. We started to perceive the mind not simply as a passive instrument, but as an active agent in framing our perception, one that could improve or inhibit our access to reality depending on how we managed it. Our second order relationship with mind—and

³³ See Robert N. Bellah, *Religion in Human Evolution: From the Paleolithic to the Axial Age*, 2005.

with our own selves—became a decisive element in creating reality, *in making meaning*. It opened an inward, existential space, a gap between who we were in this moment, and a possible version of ourselves that was more cultivated, more excellent. This gap was the beginning of an axial normativity, a *personal* responsibility that we find in subsequent moral systems. There was now a standard of reality, a good or truth by whose measure we could personally succeed or fail. We could be rational or irrational, think well or think poorly. We were able to sin. This was the beginning of the individual person, the axial “self” as we now understand it.

Before the Axial Revolution, chaos, warfare and violence were part of the natural order. Human beings were merely the vassals of greater powers. With the advent of second order thinking, people began to realize they had a hand in their own misfortune. We too were responsible for violence and chaos. They also were consequences of meaning-making. This axial insight is captured by the following phrase in *The Dhammapada*: “the mind is the chief thing... there is no enemy greater than your own mind, but there is no ally greater than your own mind.” Cognition is a double-edged sword. If it goes undisciplined, it leads us to illusion, self-deception, and violence. If we discipline it through self-correction, our cognition becomes a greater power of its own, and it can alleviate unnecessary suffering. Thus was the gauntlet thrown at the foot of humanity. Wisdom was not a luxury, but somehow a necessity. This insight was the beginning of antiquity as we now remember it.

Chapter 3: The Continuous Cosmos and Modern World Grammar

In the previous chapter, we explored how the evolution of meaning had much to do with the process of exaptation: the way our species responded to the demanding conditions imposed by our environment, and by the inner space of awareness that emerged from our use of psychotechnologies. Exaptation, the repurposing of one cognitive capacity to produce another, has been one of our most powerful tools. These moments of evolution not only solved vexing problems, but created new ways of interacting with the world, and eventually, new ways of reconceiving it. The shamanic integration of flow with Altered States of Consciousness, the insight and refinement of intuition, the capacity for metaphorical thought: all of these expanded human cognition by making it much more creative, capable of reading patterns, and generating connections between different scales and categories of the world. This allowed our ancestors to gather the world together, to unite different parts of experience and create working models of reality, of the structures that seemed to exist beneath us, around us, within us. These symbolic unities, or *mythologies*, gave us a new kind of agency in the world, and an idea of who we were within it. This was the beginning of what we would later call a *worldview*.

This new human agency drove the explosion of culture and technology in the Upper Paleolithic Transition (occurring around 40,000 BCE). When combined with agriculture in the Neolithic Revolution, it made the Bronze Age civilization possible. In the wake of the Bronze Age collapse, alphabetic literacy and coinage became new ways of exapting this symbolic capacity. They made both literacy and numeracy more effective, more efficiently learnable. This had an exponentiating effect on distributed cognition. We could link ourselves together faster and in more complex ways, and coordinate to solve more intricate problems. As I explained in the previous chapter, these psychotechnologies internalized into our metacognition, and this second-order thought provided a heightened awareness of our own cognition—of both its power and its peril. We were alerted to our own meaning-making nature, its capacity to generate illusion and self-deception, but also to break these patterns of illusion and make contact with something real. Axial culture became aware that the transformation of mind, or *mind and heart*,³⁴ was the way to alleviate suffering. This dawning of personal responsibility was a deep and profound change in the mythological framework that began in the shamanic world.

It is important to explain how I am using this word—*myth*. It is often used now for something spurious or unreal, a falsehood that is widely believed. I am not using it this way.

³⁴ In the Axial Age, these terms are often referred to in a singular manner.

When I speak of myth in this book, I am continuing from the shamanic context, using it in the tradition of thinkers like Carl Jung, Paul Tillich, and Victor Turner, among others. Myths are not false stories about the ancient past, they are symbolic motifs that represent and dramatize perennial patterns, the structures of meaning that are always with us. Myths allow us to bring these intuitive, implicit patterns into consciousness, to make them shareable, and allow us to internalize, ritualize, and apprehend them in more revealing ways.

The Continuous Cosmos, and the Great Dis-embedding

Epochs of humanity are in part defined by their mythic character, the way they have understood and depicted the structures of reality. It can be very difficult to take the perspective of mythology that is not native to our time or culture. It requires a generous imagination. Attempting to take this perspective is essential, however, to understand the works and deeds that emerge from a particular epoch. We have to change the categories of our thinking to access a foreign phenomenology. This is a demanding task, but one we must undertake to understand how meaning evolves. For instance, in the Upper Paleolithic transition, the spirit world was not separated from the material world in the way we might think. This separation came later. The world of spirit was here with us. It was available, if you but knew how to access it, and this was the shaman's specialty. This continuity of what we might call the "mortal" or "natural" world, and the "spiritual" or "supernatural" world carried over into the Bronze Age. Charles Taylor has referred to this mythic structure as a *Continuous Cosmos*.³⁵ Taylor's formulation is very helpful for our understanding, though as you will see, I question his use of the word *cosmos*.

In the Continuous Cosmos, most people feel a deep connection between the natural and the cultural worlds, and between the cultural world and the world of the gods. In fact, these were so bound together in the Bronze Age that it is not accurate to call these worlds distinct —hence the idea of continuity. The differences between these categories were not differences in *kind* as much as differences in *power* or degree. It was not odd to imagine that animals might speak or conceal their own societies. It was also not odd for certain human beings to think themselves divine. In the Egyptian Empire, for instance, the Pharaoh was a god-king. Godship was not a metaphor for the ancient Egyptians; the differences between human beings and the gods were differences in power. This is what stratified the reality of the Continuous Cosmos. The gods were not distinguished by a transcendent moral nature. They were just more *powerful* than us, more *glorious* than us. The word most often used for describing God in the Old Testament is *glorious, shining* with power. This is also true of the Greek Pantheon; they are not moral exemplars at all. The Greek Gods, like the Egyptian

³⁵ See Charles Taylor, "What was the Axial Revolution?" in *The Axial Age and Its Consequences*, 2012.

Pharaoh, were distinguished from mere mortals by the way they embodied and wielded their colossal potency.

The Continuous Cosmos bound all beings into the same order of reality, the same hierarchy of power. But it was also continuous in a temporal sense. It was cyclical: like day into night, or winter into spring, the movement of time was perceived in large cycles, repeating endlessly through eternity. Ritual behavior in the Bronze Age was often attempting to access this cycle, to tap into its continuity and return us to that original power of creation. By enacting the metaphor, the myth of the universe's creation, we could draw from its font, its vitality. The myth was guided by nostalgia, a yearning for return, a longing to regain harmony with the movements of these cycles. A person's goal was not to change or break the cycles; if you changed your future, you would undermine your past. The continuum from the natural world, to the social world, to the divine world was blended with the continuum of time, which wrapped and recurred on itself.

Continuous Cosmos

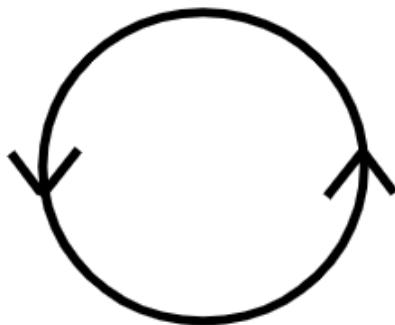


Figure 3.1: Diagram depicting the flow of the Continuous Cosmos. There is no given point of origin, but rather a cyclical progression; time is wrapped and turns on itself. Past and the future feed into each other.

With the Axial Age, the continuity of time and power was interrupted. It did not disappear altogether—some aspects of the cyclicity persisted—but a new worldview was overlaid, a different mythology for understanding the connection between self and world. Charles Taylor calls this *the great disembedding*, in which the world of the Continuous Cosmos was replaced by a different mythological structure.³⁶ The mythological disembedding was another seismic shift in the human species, but this one seems more recognizable because its roots are discernible in modern mythology. Remember that to speak “mythologically” is not merely to speak literally, scientifically, or even metaphorically. I do not mean that the

³⁶ Ibid.

materiality of the earth changed in the Axial revolution. Rather, human beings changed their relationship with reality. We came into a new way of seeing, of knowing, and of being. The world changed because we changed, because the *meaning* of things changed.

In the great disembedding, one world became two. The *everyday world* was that of the untrained mind, a world beset by self-deception, self-destruction, illusion, violence, and chaos. To live in this world was to be out of touch with reality. The *real world* lay behind this world of illusion. This was how the trained mind, the wise mind, saw the world. The contact with reality did not yield a descriptive knowledge, like the kind that science pursues. It is more useful to think of this contact in the analogy of a personal relationship, moving from an acquaintance defined by pretense to one defined by genuine, mutual understanding. Contact with reality was somehow also contact with yourself. Understanding was the restoration of your agency, and the reduction of suffering—not physical pain, but the anxiety and despair that come from chafing against the flow of the world, and being out of touch with its fundamental structures. In other words, attaining contact with reality required a person to turn her mind from enemy to ally; befriending herself—becoming herself—was a way of becoming real. Once again, wisdom is understood as an integrating movement from being “apart” to being “together.” And as we will explore, using a personal relationship to analogize the movement toward reality is one of the most enduring symbolic legacies of the Axial Age.

Two Worlds Mythology

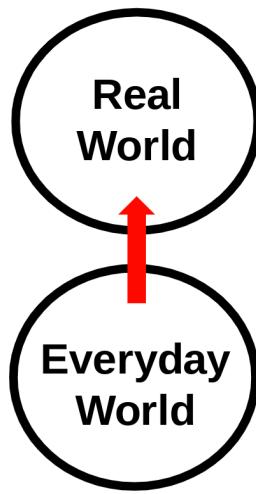


Figure 3.2: A diagram
Mythology: transcendence
beset by illusion and self-
world, wherein the trained
world for how it truly is.

depicting the Two Worlds
from the everyday world,
destruction, to the real
and wise mind sees the

In the Continuous Cosmos, wisdom is power-oriented. A wise individual learned how to acquire the power of cycles, to tap into the energy imbued at their creation. The aim of this

acquisition is perhaps best expressed by the Vulcan motto: to “live long and prosper.” This is an idea of wisdom still captured in the word *prudence*. Being prudential is knowing how to fit into the power structures of society, knowing how to make things work for you, and getting the most power and prosperity you can to ensure security for your offspring.

In the Two Worlds Mythology, wisdom is not the acquisition of power or prosperity. It is the emancipation from a lesser reality. The axial hero did not want to conquer the everyday world. He wanted to be transformed out of it. Notice the powerful instance of exaptation here: the shamanic myth of *soulflight* was adapted into the Axial context, and wisdom was now the ability to make that transformative leap. In the Two Worlds Mythology, meaning was not just about connectedness as it was in the Continuous Cosmos, but specifically connectedness to the real world. This also changed the idea of the self. In the Continuous Cosmos, you were defined largely by how you fit into the world. In the Two Worlds Mythology, you were defined more by self-transcendence, how you transformed and grew as a person. This idea persists to this day, and with the same metaphoric language. When we refer to maturing, we refer to growing *up*, and getting more in touch with oneself and reality. This transition from the Continuous Cosmos to the Two Worlds Mythology is called the great disembedding because we are somehow uprooted from the everyday world. We are now strangers, pilgrims in this everyday world. We do not belong in it. This idea is interpreted in a variety of ways: some people literalize the Two Worlds Mythology and consider the everyday world as separate and independent from the real world. Others understand this division as mythological representation, symbolizing the process of self-transcendence and self-transformation. One of the most famous depictions of this process is the Myth of the Cave found in Plato’s *Republic*.

The Axial Revolution was not simply a western phenomenon. It occurred in many places, and it precipitated the emergence of most religious and philosophical traditions we recognize around the world. I cannot account exhaustively for these traditions, but I will focus on a few specific exemplars, cultures that played host to this transformation in both East and West. These include the ancient worlds of Greece, Israel, India, and China. Each of these places developed particular psychotechnologies that became so internalized in our cognition that we mistake them for being natural features of mind. It is very difficult, for instance, to remember life before literacy, to imagine how it was to think without the ability to imagine words. Many Axial psychotechnologies are now so second nature to us that we have long since forgotten their historical origin. This historical forgetfulness is a problem; it makes us ignorant of those crucial historical factors that have propelled the Meaning Crisis.

Anticipating the Crisis of Re-embedding

The Two Worlds Mythology is a mythological form of thinking that allows us to articulate and train the psychotechnologies of the Axial Revolution, the projects of self-transcendence and wisdom. It took the meaning-making of the shaman and refined it into a more precise way of cultivating human cognition. However, this mythology is failing us now. The scientific worldview, with its materialist and physicalist metaphysics, is gradually eroding the Axial project. It is a cosmic irony, perhaps, that the scientific worldview is returning us to a Continuous Cosmos. Its naturalism is retracting the movement of self-transcendence. There is no radical difference in kind between you and the primates you evolved from. There is no radical difference in kind between your mind and your embodied existence. Science is leveling the world again. It is bringing us back to the world of the everyday, and containing us here. While many of us still claim to believe the Two Worlds Mythology and speak in commensurate ways, it does not feel liveable or practicable anymore, at least for a great many people.

This is one of the great problems of the Meaning Crisis. Since the shaman, human beings have depended on mythology for meaning-making. It has become inseparable from humanness itself. The Axial worldview still holds up our idea of the sovereign person, the individual who has agency, freedom, and responsibility. However, a mythology must be liveable in order to perform its function. The meaning of a mythology is like an atmosphere, and it gives oxygen to our idea of humanness. This atmospheric property of meaning—symbolized by the shaman's soulflight—refers to human "spirit," the idea that something about human beings is not confined to body and world, but also extends beyond it. When this symbolic reality begins to decline, it is like the thinning or pollution of that atmosphere. Our meaning-making is asphyxiated, and we are barred from accessing the spirit of soulflight. Human beings become homeless in the universe, as though the soil from which we have grown meaning, and grown ourselves, is no longer fertile.

With this comes an impossible kind of dilemma that we will discuss at length in later chapters: how do we regrow ourselves? How do we salvage the ability to cultivate wisdom, meaning, and self-transcendence—to *realize* ourselves and the world—when we can no longer use the mythological structure that is native to these abilities? We seem to be undergoing a kind of re-embedding, and it has accelerated over the last few centuries with the pivotal revolutions of Copernicus, Galileo, Darwin, and Einstein. As many have observed, these revolutions have gradually displaced us from our privileged position at the center of reality, and created a taxonomic world in which meaningful human consciousness is no longer relevant. We have collapsed back into the physical world. Much of our recent cultural history depicts a violent thrashing against this confinement, this loss of human possibility. As Nietzsche famously observed, if we live only for the next world, and the next world is taken from us, there is precious little left for the project of meaning, and the consequences are nihilism and profound self-destruction. We do not want to lose all that we

gained through the great dis-embedding, but how do we live with this legacy when we can no longer inhabit its worldview? To begin answering this question, we must gain a fuller understanding of what this world bequeathed us.

The Transformation of Time, and the Invention of Story

To retrace the steps of the Axial Revolution, I will begin in Ancient Israel. It is difficult for many modern people to fathom the scope of influence of the Bible—not just for practicing Jews and Christians, but for all who grew and live in the West. Biblical illiteracy has been steadily rising in tandem with our secularization, and this a thwarting problem for our culture—not because people should be Christians or Jews, but because failure to grasp the grammar of the Bible is also the failure to grasp the grammar of your own cognition. You may well profess to be an atheist and disbelieve the doctrines of these traditions. However, this kind of belief—in other words, the *propositional* belief—is irrelevant in this context. I am not referring to what you profess, but how you think and behave. Defining belief only by creed and proposition is analogous to defining the democratic sensibility by whether or not you cast a ballot on voting day; you still participate, however unconsciously, in the ethics, rituals and institutions that structure this form of society. In the same way, we in the West all participate in the cognitive structures endowed by the Bible’s influence. Grammar is how you put thoughts together, how you frame and convey the world in front of you. As Mark Taylor said of religion, “it is often most influential when it is least obvious.”³⁷

Nietzsche also made this point quite famously: *I am afraid we are not rid of God because we still have faith in grammar*. We still talk in the Two Worlds Mythology way, and we are still filled with the God grammar of the Bible. For example, when you go to a movie and track the protagonist, you notice many of the same patterns and motifs, not invariably, but with great frequency. The protagonist begins with promise but usually succumbs to foolishness, greed or temptation. The fall leads to disillusionment and reflection. Then, they have an insight; they are drawn back by a glimpse or vision of what is more real, and good, and they surrender or sacrifice themselves to this good. In so doing, they redeem and restore the world around them. Our most celebrated modern myths, like *Harry Potter*, *The Lord of the Rings*, or our multitude of superhero mythologies, are all suffused with patterns drawn from biblical grammar, sometimes alloyed with elements of shamanic and Bronze Age mythology. These stories continue to move us, to exert a powerful hold over our nerves and imagination. We still want to be saturated in these universes, to expand them and live inside of them. Departures from these symbolic structures—like the unredemptive deterioration depicted in zombie myths³⁸—are striking for precisely this reason. It is not only fiction that

³⁷ See Mark Taylor, *After God*, 2009, xi.

³⁸ See Vervaeke, Mastropietro & Miscevic, *Zombies in Western Culture: A Twenty-First Century Crisis*, 2017.

recreates these patterns; many secular therapeutic methods and addiction treatments, like Alcoholics Anonymous, are also structured around these motifs.

In describing the pervasiveness of religious mythology, it is important to emphasize that I am not advocating for a particular religion. Rather, I am explaining how the Axial psychotechnologies have naturalized into our cognition, our existential sense of being. The mythology of the Judeo-Christian heritage, for instance, has become an invisible architecture for our thinking, a meaning we live in, furnish and re-furnish over time. One of the psychotechnological inventions that undergirds this architecture appears so obvious that we do not stop to consider its novelty: the understanding of time as a cosmic narrative, as a *story*. All cultures tell stories, and we will unpack the cognitive science of story in later chapters. Yet the Continuous Cosmos was not a story. It was a cycle. The story has a beginning, a crucial turning point that forces a crisis and leads the protagonist to act, and a resolution. There is a direction to a story. There is a *purpose* to it.



Figure 3.3: Depiction progression of the

of the linear storyline.

Directionality establishes a progression, which involves a series of events leading to a turning point, eventually followed by a resolution. The creation of a storyline concept of time with a linear direction as opposed to the cyclical pattern of the Continuous Cosmos facilitates the ability to focus on one's progression in life towards an open future.

Since the Axial Revolution, the West has expressed the passage of time through the pattern of story, the unfolding of a narrative in a single, linear direction. Yet this was a radical reinvention of time. The cyclical Continuous Cosmos was not an open future. It was an endless recurrence. The Eastern cultures of the Axial Revolution began to regard this temporal repetition—like the *samsāra* in Buddhism, Jainism and Hinduism—as a form of suffering, something aimless and illusory that tethered us to the lesser world. It is common for the Western mind to regard reincarnation as an adventure, but this is a misapprehension. The object of these Eastern traditions is to be released from those cycles, not to indulge them. *Moksha* refers to freedom. *Nirvana* refers to cessation. In each case, there is a transcendent objective that draws the individual beyond the cycle of time.

This linear concept of time was invented—or at least significantly developed—in Ancient Israel, perhaps influenced from Persia through Zarathustra. This concept of time was revealed in the God of Ancient Israel. Gods of the pre-Axial world were generally gods of a place or function. There was a god of wisdom, of weaving, and of hunting. There was a god of Ancient Thebes. Gods were local entities, embodiments of those patterns that vectored significant aspects of human life and activity. However, they had no significant moral arc; they were unchanging features of the universe, like the celestial bodies in the sky. The God of the Old Testament broke this pattern. This new God was summative, but indefinable. He was like all of the other gods, and like none of them. This God was not bound to time and place, but moved through both. His novelty is dramatized in the Book of Exodus, which also depicts the birth of the Axial Revolution from the Bronze Age world: God appears and liberates the Israelites imprisoned in Egypt, and sets them on a journey towards an open future, a promised land. The cycle of repetition is thus broken. The narrative begins.

The God of the Old Testament is the God of the open future. It is significant that he first appears nameless; to name something is to locate it, specify it, and tie it down. When He reveals His name to Moses, it is often translated as “I am that I am,” but a closer translation reads, “I will be what I will be.” I am the God of the open future, and you can participate with me in the ongoing creation of that future. You can shape it, reveal it, bring it to resolution, or steer it off course. Here again we see the emphasis on human agency that becomes so central to the Axial Revolution. Human beings are called to coauthor their fate, to bind themselves to this God of the open future, not by coercion, but by will. In her book *The Gnostic New Age*, April DeConick has described this transformation as a turn from “servant spirituality” to “covenant spirituality.”³⁹ Creation is not simply given, but continues to unfold. Human beings, with our moral action and meaning-making, are called to participate in the course of its unfolding.

The Hebrew Relationship with Reality: Kairos, Sin and Da'ath

We still hold fast to this idea, the idea of time as a *course*, a story with forward momentum. A story does simply flow, it *turns*. It brings decisive moments of revelation and transformation, wherein one nature or reality yields to another that is more complete. The idea of character is rooted in this kind of revelation. The most classical works of narrative are those wherein the turn of the story reveals character in such a way that the revelation is both creation and recollection—*realization*. The turn surprises us, yet could not have been otherwise. Though we understand that the events of life do not always seem to follow these structures, something nevertheless seems true about them. We seek them out with

³⁹ See April D. DeConick, *The Gnostic New Age*, 2019.

religious ardor; we are moved by them, find ourselves in them, feel ourselves known by them. We celebrate great novels, plays and films for precisely this reason: by participating in them, their turning seems to turn us. They bring us closer to ourselves, and closer to what is real.

As with most historical transitions, the cross-fade from Continuous Cosmos to Axial mythology was gradual rather than immediate. You can detect many aspects of a Bronze Age god in the Old Testament, but He becomes more Axial as He becomes the force of *progress*, the idea that history, when directed to its proper course, is moving closer to its purpose, gathering together across time, perfecting and refining, becoming more real. This gathering is happening on a cosmic scale, but also on an individual scale, and God becomes the correspondence between these scales, whose revelations collapse together—like the character and the world of a narrative—when the narrative reaches a pivotal turning point.

The turning point of the story is called *Kairos*. In common parlance, kairos refers to a critical or opportune moment, an opening in time that allows us to see, access or intervene in something that was once invisible or obscure. In the Two Worlds Mythology, kairos is a revelation of the real world from within the mirage. Our readiness for the opportunity is prepared by the state of heightened participation—or *flow*—wherein we are more attentive, more perceptive to patterns, and more prepared to act nimbly. The etymology of the term invokes the skills of incisiveness and accuracy; in the Ancient Greek tradition, “*kairos*” was used in archery and weaving, referring to the narrow passage through which the arrow or yarn must pass in order to meet its aim. The archery analogy is very significant; the idea of striking the target—recall the *project* of the shaman—exapted to symbolize the penetration of illusion, the direction of attention to the greatest order of reality. A famous phrase from the Upanishads reflects a similar idea: *Om is the bow, Self is the arrow, Brahman is the target*. As I will explain in later chapters, the idea of kairos also becomes a significant feature of the Christian tradition, a crucial turning point and culmination in time that brings the cosmic story back on course and restores an eternal pattern. The ignorance or denial of the kairos is closely related to the idea of sin, which, as many have observed, originally means “missing the mark.”

As we progress, we will discover that ritual and religious participation are embedded in these symbolic exaptations, the internalized movements of ancient crafts, like those of archery and weaving. Each involves a rejoicing of our attention to the *center* of reality, gathering it back together, discovering it by creating it anew. Kairos requires a shamanic synonymy of knowing and participating. This synonymy is captured in the idea of *Da'ath*, an ancient term for *knowing*, used in the Bible to refer to sexual intercourse (e.g. Adam knew his wife Eve). Modern Westerners may find this confusing; we do not often use sex as a metaphor for knowledge. Yet there are many cultures that do. The identity relationship

between knowing and participating is a fundamental Axial idea, and it is central to understanding the religious nature of the ancients and their symbolic way of experiencing the world. “Knowing” is not the apprehension of facts, seen dispassionately from the outside. It is nothing you could acquire from a distance. You know something by assuming its identity, by becoming it. Your becoming it somehow changes it, reveals it, makes it real. The sexual metaphor, and this process of realization, recalls Heraclitus’s “hidden unity,” and the symbolic joining of the world we discussed in the previous chapter. As one of his famous fragments reminds us: *the river I step in is not the river I stand in*. Knowing is like being immersed in the flowing course of the river. You cannot know this river without also being known by it, and you cannot know it without being changed by that knowing. When you are making love with someone, you are participating in them, identifying with them, empathizing and resonating with them. You are changing them as they are changing you, and this process of change rises —forgive me the pun—to a climax, after a turning point and before the resolution. You may begin to see why, in so many religious traditions, sexuality is a perennial symbol for our sacred union with reality. *Da’ath* describes our participatory knowing in the course of its unfolding.

This idea of knowing is critical for our project because it changes the way we interpret religious ideas of faith and belief. In Ancient Israel, faith did not mean having incredible beliefs without evidence. That is a recent, very modern idea. Faith was *Da’ath*. It described this symbolic relationship you had with the world, and with your existence. It was your sense of living in this reciprocal realization; you were on an unfolding course, you were involved and evolving with how the world was occurring. You reached a turning point, and realized that you must change in order to maneuver it, and remain on the right path. In order to be more of yourself, you had to transform yourself to match the widening frame of the world. Faith is relational expression; it describes your relationship with reality, with its identity, participation and evolution. This is much like the relationships you have with your family, friends and intimates. You may often ask yourself: how is this relationship going? Is it on course? Is it progressing, and growing? Is this the kind of person I want to be with? What is my sense of how I am changing? Is this all going well? Using personal relationships to symbolize this connection with reality is a profound cognitive shift. It means that we participate in—but do not singularly produce—the meanings that we live. That is what we mean by *Da’ath*.

Understanding faith in relational terms is helpful for showing us how it can be distorted. You can mistake a relationship. You can force it, try to dominate it, or fail to act decisively. The relationship can be characterized by fear, avoidance, or anxiety, rather than courage and reciprocity. It can suffer illusions and misapprehensions. You can think you are on course when you are, in fact, dramatically off course. When you find yourself veering from the path and misplacing your attention, we might say that you have *trespassed* on the

relationship. This kind of language returns us to the idea of sin, but our biblical illiteracy inhibits us; we are tempted to understand sin as doing something immoral, committing a particular act of transgression. This is much more a symptom than a definition. Sin is better understood as being in a distorted relationship with reality. It is the misdirection of love and attention. Recall the archery analogy that sources the term's meaning; you cannot shoot for where your eye tells you to look. If you do, you will miss the bullseye. The true arrow is guided by Da'ath, the kind of knowing that conforms the attention of the archer with the proper target. The archer and her target seem to share the same body, the same identity. Their craft is a movement toward connectedness and participation. When she lands the target, it becomes real to her. She stakes herself in its reality. She is binding herself to the world, and the world to herself. One way of understanding sin is as the failure to effect that binding.

It is important to understand that the kind of knowing I describe in Da'ath is not passive. It is both generative and consequential. It is an act of relating that shows forth the world, and brings it into consciousness. Just as sexual union can result in childbirth, so our union with reality helps to create—or reveal—the meanings that we live in. To mistreat this relationship does not simply mean mistaking reality, but refracting and distorting the way that reality occurs. Self-deception is not an isolated error. It draws us away from reality, and because our actions are consequential, it draws reality away from itself. This is why the Axial world was so determined to awaken from it. The future was now open, and human beings were thrown into a universe in which they had the opportunity of participating in the creation of that future. This freedom of participation, and the responsibility of drawing forth this meaning (as the archer draws her bow) can also produce a powerful kind of anxiety. The possibility of sin was now implicit in every perception we made, and every action we took. The anxiousness of this responsibility has been amplified in the modern existential tradition, where we lack the Two Worlds Mythology to give us an orienting marker for reality. This, as I will discuss in later chapters, is among the more powerful and features of the meaning crisis.

Notice what the Hebrews were doing. They took this movement from the everyday world to the real world and they turned it into a story, into a *history*. This movement was their journey to a promised land. But their own sins could intervene in this story; they could make decisions that steered the course of history away from its proper culmination. God's intervention was required periodically to correct for their error, to wake people up, to remind them of the proper course. In the Old Testament, this intervention came in the creation of the prophetic tradition. Like sin, prophecy is a concept that has been refracted by modern misunderstandings. A prophet is not merely someone who foretells the future. Prophecy means *telling forth*. Like the shaman, the prophet sees more deeply into the patterns of reality, and can understand how human beings are affecting the unfolding of

history. The prophet can therefore perceive future consequences of our foolishness by seeing into the present. He tells us how we have mistaken reality, and exhorts us to wake up to our moral responsibility and return to the path of the promised land. Ideas of justice, righteousness and moral decision making are all taking shape in the Old Testament Prophet, though they are still mixed with many pre-Axial elements.

The tradition of prophecy helped to enshrine the idea of the metanarrative, a cosmic story that is played out on the most intimate and personal scales of reality, and that relies on our minute actions and decisions in order to be realized. This is a highly radical idea, that we participate in this colossal dimension of reality, that our own narratives somehow connect to it and share in its identity. When we veer from the right path, the entire story veers with us. We perceive our own stories as having precisely this kind of cosmic importance. You think of yourself as somebody who is on a journey, trying to make a better self, trying to make the right decisions and trying to steer things toward something truer and more meaningful. You want to progress. You want your culture to progress. The wisdom of the prophets is the practice of remembering that our paths fit into a more encompassing path. This is the practice of remembering God, not by reciting beliefs, but by participating in the ongoing creation of the world: shaping the future, helping yourself, your neighbors and your society to progress. Progress is measured by moral improvement, justice, and flourishing. It means living up to our promise, both individually and collectively.

Try to imagine how you would understand and judge yourself without this notion of progress. The very idea of living up to our potential, of fulfilling our promise, is part of the grammar we inherited from the Hebrews. It is now part of the very way we think, part of the warp and woof of our cognition. Later in the book, we are going to return to the idea of *kairos* as the fulfillment of this promise.

Birth of the Greek Cosmos: Cognitive Fluency, Democracy and Philia Sophia

As the Hebrew metanarrative unfolded a new kind of cognitive grammar, there was another cognitive transformation taking place in Ancient Greece. As I will discuss in later chapters, the evolution of meaning and *kairos* has much to do with how the Hebrew and Greek cultures, and their distinct symbolic forms, came into penetrating dialogue—or *Da'ath*—with one another. When the Greeks inherited the psychotechnology of alphabetic literacy, they did something deceptively radical: they added vowels to the alphabet. In doing so, they made it easier for human beings to process information. To explain the importance of this development and how it works, I need to introduce you to another important idea from cognitive science: the concept of *cognitive fluency*.

We have increasing experimental evidence for the following fact: when you increase the ease at which people can process information—regardless of what that information is—they come to believe it is more real, and have more confidence in it. This ease can be effected by something very simple, like changing the color contrast between the letter font and the page. If the contrast is cleaner, and the font is easier to read, it will significantly improve the reader's contact with the information. This contact is not simply a matter of comfort; if two people read the same text with different contrasts, the person with the better contrast will have more confidence in the content, and is more likely to believe it true. Fluency of processing increases your confidence in the processing itself, and the image of reality that takes shape through its medium. The ease does not just remove strain on your senses, it changes the way your brain is accessing and applying the information it perceives. When your cognitive fluency improves, your brain generates an enhanced sense of being in touch with things. This is not an arbitrary correlation; there is great effectiveness in taking the ease of processing as a measure of our contact with reality. Cognitive fluency helps to generate the flow state, and is therefore a contributing factor in our capacity to pick up on real and relevant patterns.

So when the Greeks introduced vowels, they improved the *fluency* of alphabetic literacy, and made it much more powerful. They also introduced a standardized reading format from left to right, which we now take for granted.⁴⁰ Standardizing the format helped to make literacy more consistent, predictable, and easier for cognition to automate. This meant that, in Ancient Greece, the power of literacy to enhance cognition—both individual and distributed—was profoundly ratcheted. This cultural apparatus was also complemented by another social psychotechnology; the Greeks did not form a unified nation state, but a number of individual city-states that were all in competition with one another. Athens was the hotbed of the Greek Axial Revolution, but it is perhaps most known for its political innovation. I am referring, of course, to the invention of democracy.

Ancient Greek democracy is a prototype of our modern equivalent, but differs from it in many ways. For our purposes, it is important to understand that the direct form of democracy placed a premium on argument and debate. This practice gathered together and exapted many of the other psychotechnological innovations of the time, like alphabetic literacy and second order thinking. The simultaneous constellation and distribution of these technologies worked to accelerate the Axial Revolution, and it multiplied the variety of abstract symbolic tools, such as mathematics and geometry, that could be used to perceive patterns, measure truth claims, and generally make sense of the world. Our capacity for individual reason and reflection was being extended into more social and

⁴⁰ Other languages of course, like Hebrew, are read from right to left. It is not the particular order, but rather the consistency, that improves the fluency.

organized forms. At the center of these innovations, a new capacity was taking shape: the cultivation and training of rational argumentation. This is justly known as the most radical invention of the Ancient Greeks, and it had profoundly meaningful consequences for everything that followed.⁴¹

The legacy of the shaman was key to these innovations. Just like their forebears, the inventions of the ancient Greeks were embodied in certain exceptional individuals. Their capacities were exemplary of the Axial Age, and their examples reorganized the imagination of their epochs. These individuals became known as “lovers of wisdom” (*philia sophia*) or *philosophers*.

Some of these Axial philosophers are still well known to popular consciousness, while others have been relegated to niche scholarship. One of the most influential philosophers of the period is still recognized primarily for the mathematical theorem that bears his name. Pythagoras belonged to a group of individuals that emerged from the end of the Dark Age around 600 BCE. These individuals would be called the *Divine Men*, and they seemed to represent a rediscovery of shamanic psychotechnologies.⁴² They were liminal figures that straddled the mythological and rational forms that characterized the Bronze and Axial Ages. Though Pythagoras was a real person, and associated with the inventions of mathematics and argumentation, his legend is also suffused with shamanic abilities of healing and flight. These legends retained important mythic elements that would later fade from the philosophical tradition, specifically the emphasis on self-transformation. Pythagoras seems to have undergone a form of shamanic training. He engaged in a ritual called the *Thunderstone Ceremony*, which involved isolating himself in a cave for a length of time and reemerging after a radical transformation. He even seems to have experienced soulflight; Pythagoras became known as one of the earliest proponents of *metempsychosis*, the idea that the human psyche can migrate away from the body.

Pythagoras was a pivotal figure, and he stands as a bridge between the ages. He was tall, and dressed as a god. He had the mien of a Bronze Age deity, just like the ancient pharaohs. He reintroduced shamanic meaning-making and self-transcendence into the Two Worlds Mythology, and refined these powers with rational argumentation. He enhanced the symbolic ability to commune more closely with the world, and to catch hidden patterns that were outside human awareness. His insights and discoveries were instrumental in

⁴¹ This is not an ethnocentric claim. The emergence of rational argumentation in Ancient Greece does not privilege the cognitive capacity of this region, or mean that other groups or cultures are comparatively irrational. It simply means that, due to a combination of historical forces and circumstances, this was the place where the innovation occurred.

⁴²See Francis McDonald Cornford, *From Religion to Philosophy: A Study in the Origins of Western Speculation*, 1991.

uncovering many principles we now take for granted: the discovery of the octave and ratios, and the presence of mathematical proportions in the world. Pythagoras embodied the idea that human beings are trapped in this world, but with training and cultivation, can learn to fly above it.

At the beginning of the chapter, I noted that I do not like calling the pre-Axial world a *cosmos*. This term began with Pythagoras. *Cosmos* is not simply a synonym for the universe. It is a unifying principle or form of order that gives reality its elegance, coherence, and arrangement. To understand its meaning, consider the word *cosmetics*. Pythagoras had the idea that we could use music, mathematical thinking and Altered States of Consciousness to trace the contours of this supernal order. This order was perceived in the aspect of beauty.

As I will discuss in the next chapter, Pythagoras's *cosmos* anticipated the relationship between beauty, order and realness that would become essential to the Greek philosophical tradition. When people report Awakening Experiences, they often rediscover these Pythagorean affinities. They suddenly perceive the world as a *cosmos*, and their perception of order and coherence is suffused with beauty. The notion of *cosmos* created a powerful model for how we understood meaning and wisdom—what a self was, how it perceived and grew, how we fit into the universe, and how we made contact with reality. It draws a striking contrast with the modern worldview; though we continue to use his word, it has been largely emptied of its shamanic and shimmering qualities.

Thank you for your interest in the upcoming title *Awakening from the Meaning Crisis: Origins* due for publication in late 2023.

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