HOLY TERROR
AND THE BEAUTY OF IT ALL

How to Live with Existential Anxiety

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Holy Terror and the Beauty of It All:
How to live with existential anxiety

“All of philosophy is training for death”
– Socrates

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PREAMBLE: Training for Death Is Training for Life

From time immemorial, people have intuited that there is more "going on here" than meets the eye. Sages perennially counsel that life is illusory or dreamlike. The folk advice to pinch oneself only raises further questions. What is this flesh that it *feels* anything at all? How can mere matter, made of atoms, be sentient? What is this world, which seems to be real, and what am I who perceive it? How can we know anything with certainty? If such questions do not make headlines, they nevertheless lurk in the back pages, in the fine print waiting to perplex and unnerve us.

If consciousness can seem suspiciously dreamlike, I propose that is because it is not a direct window on the world but more of a dreamlike story, a real-time skit or narrative *about* reality that is not reality itself. It is a multisensory show we put on for our own benefit. What we experience as the world is a simulation or guided hallucination created by the brain to facilitate survival. One is at once author of this narrative, its audience, and its central character.

Our experience is by nature full of uncertainty. The troubling ambiguity of consciousness leaves us uncertain what is real and what realness even means. Subject and object are hopelessly entangled, which puts everything in doubt, including our own nature. All that we can experience, think, or do involves both self and world inextricably, acting always together so that we can never be sure what comes from within and what from without, or

how valid the distinction even is. I propose that this renders us fundamentally anxious creatures. The inability to know anything beyond the reach of doubt inspires in us a deep anxiety that I call *holy terror*. At its core is uncertainty. Yet, the fear of not knowing is enforced by the threat of not being. The awareness of mortality thus plays a key role in our anxieties and our human identity. It drives us to create specifically human realms in which certainty and control seem preferable to the often inhospitable and inscrutable natural world. It drives us even to seek immortality. Man is the creature that uniquely strives to be self-made, self-sufficient and self-defining—liberated from natural constraints, even from death.

That we recognize an inner realm as well as an outer one poses a further dilemma. We have *carte blanche* within imagination and thought; on the other hand, meaning is naturally found outside us in the real world, which constrains us in myriad ways. There is a trade-off between the transcendent *freedom* that inheres in subjectivity and the *meaning* that inheres in what is imposed by the external world through biology. One can have free will *or* ready-made sense. But can one have both? The ultimate price of the freedom may be to live in a world that seems arbitrary, inhuman, and empty of meaning and purpose. And that may seem reason enough to choose something other than such freedom.

The situation would be quite different if life were literally a dream or fairy tale. One can fly in dreams and be guaranteed a happy ending in fairy tales. Freedom reigns

supreme in a fictional world—provided, at least, one is the author! If not, the fiction still provides a well-defined, dependable environment whose structure and rules are relatively clear. One knows the ropes and where one stands in such a limited and limiting world. If you are reading a novel, for example, even though you might not foresee the ending in advance you can skip ahead to find out. Each time you locate a given page it reliably gives the same answer. You also know it is *only* a fiction, a fantasy in which you cannot be actually harmed. It engages us to the degree it seems to be real, while we know that it is not. Entertainment does not demand attention in the serious way that reality does, but offers respite in a safe and self-contained imaginary realm. We may take comfort in the knowledge that it is a product of human skill and imagination. There are no consequential decisions to make, which are made instead by imaginary characters—that is, by the author. At no risk, we get a vicarious thrill by identifying with the characters and their challenges. Though the hero may die, we do not. All such advantage depends, however, on the ability to take or leave the world of that fiction at will. It is only entertainment if you *know* that it is, if you have another world in which you "really" live, and if you know the difference.

The brain's job is to help the organism to survive. It does this partly through the sheer invention of narrative. Daily perception is a pragmatic invention of that narrative sort, and so is scientific theory. What it *means* for these cognitive stories to be "true to reality" is that *believing* them

facilitates survival. This inclines us to take appearances at face value. We *must* experience the world as *real*, rather than as a fantasy or fiction. It must not seem a mere dream or a show produced in the brain. The very *experience* of realness acknowledges the power the natural world holds over us as organisms. Without the conviction of realness, we would not take our senses seriously enough to survive.

In a parallel way, we treat scientific theories as descriptions of reality. Sensory perception and science are alike forms of cognition that help us to know what to expect and what choices to make. On the other hand, a novel, a movie, or a computer game is mere entertainment, without real consequence or commitment to reality. One can break off engagement at will, to re-enter the real world. One can close the cover of the book, look away from the film. One can "die" in the digital game and reset to begin again. But, one cannot break off engagement in the real world for any length of time without serious consequence. Reincarnation and resurrection notwithstanding, one does not come back to life to start over. Our narratives about the world hopefully keep us in the game of life; but, equally, our commitments in the game of life tend to keep us within certain narratives, playing certain games. Nevertheless, we are reminded from time to time that in some sense it is all *only* a game,[1] perhaps a "tale told by an idiot," which we have *invested* with meaning in much the way that one gets caught up momentarily in literal games or stories. We are

[1] A *game* in this broad sense consists of defined elements: rules, playing pieces and a playing space. Formal logic is such a "game", as are axiomatic or deterministic systems and machines.

reminded that our life, like a story or game, will come to an end.

In the consumer culture, with its cult of youthfulness, death has long been a taboo subject for polite conversation. Dead people are most often quickly whisked out of sight. Despite this, even children are interested in death, sometimes obsessively. An ancient tradition of remembering death in order to live more fully is fortunately now re-emerging. Life-changing "near-death experiences" have inspired a spate of literature. Interest in death and dying among aging baby-boomers leads them to attend "Death Cafes," and even workshops on how to wash and care for corpses. The Internet offers a host of online counselling services concerned with bereavement and preparation for dying. Most recently, a global pandemic has reminded us all too dramatically of death's stalking presence.

In some ways, however, all of this serves to compartmentalize death as a topic separate from everyday living, a special concern for those touched directly by it. Especially for medical science, the broader significance of mortality as a mainspring of un-ease remains obscured by the view of death as a dis-ease to cure. Death is a problem to solve rather than a natural phase of life. For many people, mortality remains something to shun at any cost and to avoid even thinking about. Yet, even conquering death, were that possible, would not necessarily tell us what life is about or how to live.

The idea of *memento mori* is traditionally religious. Remembering the inevitability of death served to keep

one's eyes directed heavenward, not to become too caught up in the vanities of this world. For those who are not religious or do not believe in an afterlife, the concept is still useful for similar reasons: to put things in perspective, to reserve a part of oneself for contemplation, to enrich one's limited time alive, to remain awake to each moment and not take anything for granted. Especially when someone we know dies unexpectedly, we are shockingly reminded that death can happen any time, even to us, even in the very next moment.

It is no good thinking about death, however, if it only makes one more anxious. Contemplation of mortality must get to the bottom of anxiety itself, which often involves a gut fear of not existing, of losing the consciousness one takes oneself to be. One must also face the unseemly *processes* of aging and dying.

Uncertainty and the unknown make us anxious, partly because we are obliged to think and act based on insufficient information. The disconcerting fact that gives rise to anxiety in the first place is that there is *nothing at all* that we can know with utter and final certainty, including what happens after death and what is "really" going on here in life! These may not be issues we choose to regularly think about. They may not be issues for those who are committed to a religious narrative. But they are precisely the issues facing those who seek a peace of mind that does not rely on a fixed dogma. For, to embrace *any* belief—however self-evident it might seem—involves a choice based on limited information, and thus is potentially

fraught with anxiety. Such issues are at the forefront when "normality" must be redefined.

I will argue that a further benefit of contemplating mortality is the capacity to actually *enjoy* experiences that might otherwise make one anxious. That is the possibility of *appreciation*, which is private enjoyment of experience itself, and of the world itself, apart from any need to know or act. Habitual judgments, needs, responses and decisions that normally dominate daily life are provisionally set aside. Extraordinary times may even facilitate this. One doesn't have to be a monk who sits in graveyards at night to confront anxiety. Each waking moment for everyone, in good times and bad, offers the opportunity to appreciate one's life and consciousness!

The ambiguity between the subjective inner life and what seems to be an objective external world is an age-old theme that suggests a basic schism. Though we may not often dwell on it, we moderns are well aware of this split and its paradoxical implications. For, even though we normally direct attention toward the world beyond the skin, we know that our experience is actually produced inside the skull. We cannot help but wonder just what sort of thing that inner production *is* and how this "show" actually relates to what we must suppose is really "out there." Because all experience is fundamentally ambiguous, we can never be quite sure of our perceptions or the validity of our thoughts. Though we may *feel* certain, we know that the feeling is subjective and questionable. We cannot help being dogged by subliminal doubt.

To consciously grasp the participatory nature of experience promises some inner control over what we experience. It has the downside, however, that at any given moment we are at liberty to either trust or doubt our instincts, perceptions, feelings and thoughts. To some extent, consciousness enables us to bypass the protective automatic programming one inherits by default as a natural organism. That programming is a well-tested response to the power the world holds over us as organisms. To consciously shoulder the burden of that programming would be an onerous responsibility, were it even possible. Yet, we are saddled with the awareness that conscious choice is at least conceivable, however well it can be exercised in practice. Whether consciously or not, the organism is faced always with the troublesome and dangerous task of making decisions in the absence of perfect information. To be conscious of one's consciousness burdens one with the awareness and responsibility of choice in general.

One could refuse this burden by putting unquestioning faith in one's perceptions, instincts, thoughts, and beliefs—placing them beyond the reach of doubt. A similar strategy is to live within the confines and the artificial certainty provided by some narrative or dogma, strictly adhering to some well-defined game. Yet, these too are inevitably choices, if only unconsciously made. The merest inkling that choice and responsibility are thus *inescapable* elicits holy terror. It is terror because it is the view down a dizzying hall of mirrors, a maze where a wrong turn can be fatal. It is holy because it underlies

everything, even religion and what we deem sacred.[2] Yet, it is consciousness of this inescapable burden of choice and responsibility that renders one a *person* rather than a mere bobbing thing or puppet!

Philosophy has expressed the dilemma intellectually as the problem of *free will*. Science has formally expressed mere matter's apparent lack of freedom as *determinism* (in contrast to which the scientist's mind remains aloof and free to speculate). Religion has expressed the dilemma with the notion of *sin* (or hubris, for the ancient Greeks): the pitting of human will against divine commandment or fate. Essential to the idea of willfulness, however, is moral realization: knowing what you are doing. Without consciousness, and self-consciousness in particular, one is not deemed morally accountable.[3] Animals, machines, and the insane are exempt from moral and legal responsibility; but sane *persons* are deemed accountable. One can have rights with responsibilities *or* one can be excused responsibility and forfeit the full rights of personhood. Why, then, are we burdened with self-consciousness if it is so onerous? Why did we not remain, as the beasts, blissfully ignorant of our nakedness in the Garden? Or, as the reflective scientist might now put it: how and why (if at all) do we differ from

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[2] Of course, this "terror" has nothing directly to do with political terror. Armed terror is usually done in the name of certainty; ironically it is likely motivated by a deep anxiety.

[3] Jesus succinctly put it: "Forgive them, *for they know not what they do*." By implication, there is no forgiveness for those who *do* know fully well what they are doing. But they alone are fully entitled to the moral and legal status of personhood, and thus subject to judgment.

deterministic machines? Why, in a material world, is there even such a thing as consciousness?

Why, indeed, should one care? This book explores several aspects of the *personal* relevance of such questions about consciousness and existence. First, it centers on a particular feature of experience that permeates the human condition and colors all our endeavors—even when, ironically, it is not fully felt. This is *anxiety*, whose core is the dread of uncertainty and the threat of annihilation that lurks behind it. One is anxious about decisions, present, past or anticipated. The core of anxiety is fear of the unknown—in particular, what might happen because of choices we make. It implies a deep ambivalence toward freedom of choice and consequent responsibility.

Secondly, the book offers an explanation of the nature and role of consciousness as a natural biological function that enhances our ability to choose wisely. It puts anxiety in the context of this function. It offers a portrait of what it means—and does not mean—to be a *self*. Consciousness is how we monitor our relations with the world around us. Such monitoring entails the further ability to monitor the monitoring. Though it has the side-effect of rendering us capable of self-doubt, this self-monitoring serves, in a socially and personally useful way, to relativize perception and to temper action. It does this by bracketing the contents of consciousness as subjective and interior. As we shall see, a strictly causal theory of consciousness is not possible. This is reflected in the fact that two millennia of philosophic tradition have not been able to produce a

scientific theory of consciousness. Nor is a deterministic theory desirable, for there is no place for responsibility in a scheme where one is no more than a cog in a machine.

Thirdly, the self-monitoring aspect of consciousness further grants a capacity to enjoy subjectivity on its own ground. This *appreciation* is the basis of art and of our sense of beauty and play. Available at all times, it can provide special consolation in old age and in situations of change, deprivation, anxiety or despair. I write this in my own senescence, after a lifetime of reflection on the nature of consciousness and the human condition. The contemplation that went into writing this book has helped me personally to come to terms with my own aging and mortality—the ultimate deprivations. Thinking about mortality and anxiety has made it easier to accept choices that inevitably deprive one of paths not chosen and horizons closed by external events. For younger persons looking forward into life, it may provide some perspective for choices yet to be made.

It is not my goal, however, to convince anyone that they suffer from an incurable condition newly diagnosed as "holy terror"! I would not deprive anyone of the comfort of any narrative or belief system they embrace. For, life itself is able enough to deprive us of games we enjoy playing. I only present ideas for your consideration: a counter-game to play, as it were, a narrative to take or leave, using what makes sense to you and discarding the rest. My counsel is to enjoy all narratives and take none on faith! More than anything, I encourage you to reflect on these matters yourself. If something rings true thus far in what I

have described as the fundamental human predicament, then I invite you to join me in this journey of exploration.

On the other hand, this is a book of reflections, not a self-help guide. I propose these meditations on mortality, consciousness, and existential questions only as an *example* of the sort of contemplation that I believe can help one to face life's uncertainties. Questions open matters up; answers are important, but they tend to shut inquiry down. The process is as important as the product, and uncertainty is a valid and tolerable state of mind. I do not promise relief from anxiety, let alone happiness, fulfillment, meaning, or enlightenment. On the contrary, an essential part of the message is that each of us is personally responsible for such things, for which there is no formula but only the guide of curiosity and consciousness itself.

The first part of the book is about the inescapable dilemmas of being a self-conscious creature—about existential anxieties and our very human ways of coping with them. The second part is about the peculiar nature of consciousness and of the self that does the coping. The third part is about possible satisfactions one may claim in the face of the human predicament. These are afforded by the ability to stand back to appreciate the sheer wonder of being here at all. This sort of appreciation has both an emotional and an intellectual side. It is the rainbow latent in the storm. In essence, it is esthetic. The proactive side of holy terror is "the beauty of it all."

Some months after completion of the first draft for this book, the 2019 corona virus pandemic broke out. It profoundly changed day-to-day life around the world in

ways that rendered the themes of *Holy Terror* poignantly topical. It underlined mortality, uncertainty, ambiguity and anxiety in a big way, bringing them to the forefront of the daily news and people's consciousness for months on end. It made us view old age in a new context as a life-threatening condition. The Postscript is a reflection on these developments, how they shape society's relationship to existential threats, and how the ideas of the book might apply in a post-pandemic world. It renews and updates the challenge, despite everything, to see the beauty of it all.

PART ONE:
HOLY TERROR

"Anxiety is the dizziness of freedom."
– Kierkegaard

CHAPTER ONE: Nothing to Fear but Nothing Itself

Plato likened the human predicament to prisoners confined from birth to a cave. They know nothing of the world outside, but only experience shadows cast upon the cave walls by various objects that are never themselves seen. Descartes described it in terms of a demon who could fake all the information coming into a brain through the senses, creating the seamless illusion of a body and a material world. He had faith that God would not permit such deception. Plato had faith that it was possible to know the reality behind the shadows. Yet, both overlooked the limits of metaphor, how utterly perplexing and circular is the mystery of consciousness, and the positive function of doubt. In particular, they ignored the creative role that belief plays in reaching any conclusion at all. How do we know that Plato's faith is not, paradoxically, just another of his cave's shadows? How do we know that Descartes' God (and indeed the demon too) is not just another trick of the mind?

Such tail chasing makes the head spin, for the human brain is just big enough to think in circles. But, is it big enough to think its way out of them? One can speculate about how brains work and what kind of situation the brain is in as an organ of perception. One can form a mental picture of how minds form mental pictures. One can grasp that any such picture is a creative invention and not a transparent window on the world. One can even realize that such intellectual "grasping" is something human creatures do in order to survive, which has at best an indirect relation

to truth. But where exactly does that leave us? What do we do with this mind-bending realization that any metaphor itself is just another shadow projected, so to speak, on the wall of the mind, another feeble attempt to hold onto something reliable?

At the beginning of the Scientific Revolution, when science was scarcely differentiated from religion, a thoughtful Blaise Pascal was torn between the truths offered by religion and those by science. He could poignantly doubt the certitude of either. We read between the frank lines of his *Pensées* an anxious struggle for certainty and order:

> "This is what I see and what troubles me. I look on all sides, and I see only darkness everywhere. Nature presents to me nothing which is not a matter of doubt and concern. If I saw nothing there which revealed a Divinity, I would come to a negative conclusion; if I saw everywhere the signs of a Creator, I would remain peacefully in faith. But, seeing too much to deny and too little to be sure, I am in a state to be pitied…"

Pascal's inner turmoil reflects the struggle in Europe at that time between religion and the spreading secularism that was also manifest in art. When sailing the seas was a risky adventure, without the benefit of GPS, he frames the dilemma in a further metaphor:

> "We sail within a vast sphere, ever drifting in uncertainty, driven from end to end. When we think to attach ourselves

> to any point and to fasten to it, it wavers and leaves us; and if we follow it, it eludes our grasp, slips past us, and vanishes forever. Nothing stays for us. This is our natural condition and yet most contrary to our inclination; we burn with desire to find solid ground and an ultimate sure foundation whereon to build a tower reaching to the Infinite. But our whole groundwork cracks, and the earth opens to abysses."

Biologically, our species is a magnificent success. Yet, underneath the busyness of daily life, in many ways the human situation remains as unsettling as it was for Pascal. Despite accurate clocks and satellites, we are still subject to the ravages of time. We know that we are personally going to die, that civilizations rise and fall, that even the planet will one day no longer support life. We know that misfortune and suffering are possible for us at any time and always actual for someone somewhere. We know that disease can bring civilization to a halt. We know that our own effects on our planetary home may soon enough make it uninhabitable for us. We recognize that technological change does not necessarily spell social progress. In spite of godlike pretentions, we suspect that nature holds a deeper sway over us than reason, morality and law. We fear being at the mercy of forces we don't understand or control, whether natural or man-made.

Like Pascal, we are assailed by uncertainty on all sides. Despite confident proclamations by science on the one hand, and by religion on the other, the fundamental deep truth is that we do not—*and cannot*—know in any absolute way what is really going on here in this drama we call existence. We have endless *ideas* about "reality", of course;

but ideas are *all* that we have. Religious and secular worldviews still compete for our allegiance. Apocalypse is as much in the air as it was a thousand years ago. Alongside the faith of scientists today that a "theory of everything" is imminent, a world-wide resurgence of religious fundamentalism mirrors and challenges the fundamentalism of science. Ironically, the overbearing confidence of both worldviews responds to a deeper uncertainty.

While they may not be foremost in daily experience, I propose that profound doubts and anxieties have always been a driving force behind human activity. Humans have always felt insecure in nature, whether conceiving its threats as natural or supernatural. Uncertainty has been present from the beginning, when culture was no more than comforting stories told around the campfire. In contrast to the eternity and boundlessness intimated in our consciousness, we are haunted by the realization that we are finite, transitory, defenseless—and perhaps meaningless—creatures. That cringing realization is what I call *holy terror*. It is often little more than a fleeting sense of mortality, vulnerability, or insignificance; a feeling of being estranged; an uncanny shadow caught in the corner of the eye. Yet, I propose that it is so fundamental to our being that it permeates and flavors all that we experience and drives much of our behavior.

The rock-bottom truth that gnaws at all we think we know is that no knowledge is infallible. Despite faith in either science or religion, we have no *absolute* assurance what reality is, or even of the best way to think about it.

We suspect in our bones that all is up for grabs, that all we take for granted is provisional, all our beliefs questionable, all our careful constructions a house of cards. This is why the young child's mind, like that of the schizoid and the so-called primitive, is particularly prone to terrors of the imagination. In truth, the normal modern adult is in the very same position of psychological nakedness throughout life, with no guarantees against a cosmos that remains fundamentally mysterious. No doubt this is one reason for the existence of superstition and the popularity of horror movies. Culture (which includes science and religion, as well as art) is the relative and conditional shield we collectively pose against a state of awe and ignorance, which is not bliss but angst. Knowledge, faith, and art are what we substitute for the unknown. Busyness (and business) is how we manage to carry on, ignoring our ignorance, to relieve the terrors of imagination in the face of uncertainty. Yet, no matter how busy we keep, no matter how much knowledge we accumulate or how sincere our beliefs, no matter how comforting our things and relationships, and no matter how secure our bank account, we also know deep down that there is no infallible guarantee that the sun will rise tomorrow or that we will not, like Kafka, wake up in the body of an insect.

Is it not weird enough to wake up in a *human* body? What is this thing, this apelike appendage to which I find myself bound, from whose eyes "I" look out upon a seeming world? Why, indeed, does the world reappear each day, largely unchanged? Why is there a world at all, with me in

it? Why am I *me* and not someone else? Why this body and not another? These are questions that plague the child. But they do not go away with adulthood. They simply go underground. We learn to ignore them or to bury them in sophisticated answers that are not entirely convincing.

The fundamental fact of existence is its sheer uncanniness. There is, after all, literally nothing to compare it to! Self-aware, we cannot help but find it bizarre to *be* conscious, looking out upon the world from a particular place and time, associated with a particular organism that is a part of that world. What do "I" have to do with that bit of flesh, confined to here and now? What does it mean to "have" a body?

It is ironic that "embodiment" has only in the past few decades become a subject of scientific interest. But it has always been a concern of religion. The relationship of consciousness to the material world and to the material body has always been troubling. It is still rated a top unanswered question for science, next only perhaps to the question of why anything exists at all. Yet, no concern could be more personal. Compared to the freedom and limitlessness that consciousness can conceive for itself, one may feel oddly trapped within the vulnerable and limited body. We have always been ambivalent about the body. Religion denies it and often enough declares war on it. Society regulates its biological urges, which often conflict with the needs of the group. Science considers it another object for study; but the scientist's body is irrelevant to the making of the science about it.

Sex has long been problematic for both society and

religion, at least within patriarchal cultures. The needs and desires associated with the body are at odds with social order and the higher aspirations of the soul. From a spiritual perspective, the body can seem like a prison or the source of temptation and evil. To the conscious self, schizophrenically enough, the body's drives can seem alternately an alien intrusion or the very font of meaning and fulfillment. We have struggled with sexual drives precisely because of their power over us—that is, power over the conscious ego with its mandate of self-control. We both celebrate and abhor that power, wavering between licentiousness and repression. We cannot help but feel embodiment as a dilemma that often poses a moral burden of choice—which entails doubt and anxiety.

Though there is no certain knowledge, yet we are obliged to make decisions as though there were. As self-conscious beings, hindsight tells us that we can make poor choices we may later regret, provided we survive them. Gifted with imagination, we can weigh consequences but may feel inadequate to decide. That feeling is now labelled anxiety, which Kierkegaard described as the dizziness of freedom. He distinguished it from fear with the metaphor of someone standing dangerously on a precipice. One might recoil instinctively from the vertiginous prospect of falling, or the paranoia of being pushed. Yet, mixed in with those feelings can be the disconcerting apprehension of an irrational impulse to *jump*. Doubt, like fear of heights, can call up every wavering consideration at once, including

Hamlet's unsettling question of whether or not even to exist.

One can seriously doubt what is real, questioning one's perceptions. One can doubt even one's own intentions. For instance, *why* do I choose to believe what I believe? What were the real motivations behind something I did or felt or said? Choice is a matter of apparent options; but it is also a matter of the purposes, values, and perceptions that shape one's decisions and even how one formulates the options. Why does one have the values one has? What justifies them? We tend to defer to external reality to present options that appear self-evident. We count on the world itself to dictate a course of action that is justified by a clearly optimal path. Yet, the very appearance of self-evidence may suddenly seem no more than a trick of the mind. We can never entirely forget our inherent freedom of choice; this can undermine intuition and the supposed dictates of reality. We may feel alone with our decisions, with nothing to count on to justify them.

In the face of such uncertainty, the core of holy terror is fear of death, which enforces all other doubts. The ultimate burden of choice is that the stakes of the gamble are existence itself. If we are anxious about what is real or what to do in a given situation, it is because a mistaken appearance, a wrong turn, or a bad choice can be fatal for oneself or for others. It might lead to a wasted life, to disgrace, to tragedy for someone. For many religious people, the stakes are *eternal* life or death—the fork in the road between salvation and damnation that hinges on the choice of what to believe.

The precarious vulnerability of the body burdens the cognition of creatures programmed to survive. But it is the human creature that is all too aware of this burden—and conscious of being aware. While we can imagine the death of the body, we can scarcely imagine our consciousness ceasing: for, even then, *there we are*, trying to imagine it! The destruction of one's own body, as terrible as that seems, is no more than the disappearance of one *thing* among the many things that exist in the world. But the ending of one's *consciousness* means the end of the whole shooting match—the greatest show on earth, as one has been privileged to witness it. This imminent catastrophe is the worm at the core silently eating away our happiness and peace of mind.[4] One fears being wrong; for, the ultimate consequence of poor decisions is that our existence may be cancelled. The wages of sin is death!

Such buried worries are called "existential" because they are about our very existence. Yet, there is a further sense in which the approach I propose is existential. For, like Sartre and Kierkegaard, I hold freedom of choice to be *inescapable*, present even on deeper levels than conscious thought and belief. While I personally lean toward a materialist worldview rather than a religious one, that is admittedly my free choice. It is free in the obvious sense that no one holds a gun to my head. But it is free also in the sense that no evidence can utterly compel it or can

[4] See: S. Solomon, J. Greenberg, and T. Pyszezynski *The Worm at the Core: on the role of death in life* Random House, 2015.

justify it beyond any doubt. I acknowledge that my faith in this worldview, based on my limited experience, serves me in much the way that other belief systems do for other people: as reassurance against holy terror!

From my materialist perspective, I do not fear hell or look forward to heaven. But, given the fundamental uncertainty discussed above, the materialist worldview has no more or less claim to unshakeable confidence than the spiritual one. While I may take comfort in it, I know that—like every belief system—it relies not only on evidence but also on premises accepted on faith. For example, science assumes that the natural world is comprehensible, which means that it can be reduced to an idea—often a mathematical one. It assumes that there should be a true answer to every reasonable question. But this assumption invites the very sort of doubt raised above; for, *many* answers are possible, *none* of them perfectly convincing or utterly certain! Unlike mathematics, science is not about logical proof but about reasonable guesswork on the basis of available evidence. It maintains its faith by limiting what it considers manageable questions—that is, by narrowing its vision. In particular, it tends to investigate only phenomena it can treat mathematically, measure quantitatively, and reproduce experimentally. On the whole, I judge science to be a far better guide to reality than religion. But I wish to underline that this judgment is a choice. The scientific worldview makes sense to me, given the frameworks and values I choose to embrace. Moreover, this emphasis on choice is itself part of the existentialist

creed, which, like all creeds, cannot be proven but must be embraced on faith.

With those caveats, I propose to view the human predicament from the point of view of a biological organism that is acutely aware of its natural vulnerability. This is not the point of view of an immortal and indestructible soul, but of an embodied ephemeral creature whose view of reality is conditioned by the need to survive, who must make vital choices based on limited information. Most importantly, it is effectively the point of view of a brain sealed inside a skull, whose only access to the world outside the skull is via nerve fibers connecting to senses and muscles. The eyes are photo-voltaic sensors, not openings in the wall of bone and flesh that transparently reveal the "real" world beyond. The muscles are activators that indirectly restore a preferred internal state.[5]

To use another metaphor, the brain is like a submarine navigator who has never been outside the submarine. Indeed, this "submarine" has no portholes and no exit hatch!

[5] We normally assume, of course, that the muscles act on the *world* (or by moving the body, which is part of the world), thus changing the state of the external world. This results in new sensory input, through which the organism seeks to re-establish equilibrium. But this assumption of an external world, while obvious to human beings, is completely unnecessary in the case of simple organisms that have no concept of the world. It is only from the human observer's point of view that the amoeba acts on the world or has a body that acts. Above all, it simply maintains equilibrium.

All information about the underwater world and the cosmos beyond comes from remote sensors. The navigator has only instrument panels and levers to deal with, and no prior knowledge of what these are for. At the outset, there is no idea even that there exists an "outside." In order to survive, the brain must *establish* the relationship between input and output that functions as a working theory of the world outside the hull. It creates an interface with the outside that functions as though it were a window. What appears in the "window" is taken to be "real," and the theory is taken to be true if destruction of the submarine is avoided. Note that this could be no more than luck, and that other theories might also happen to temporarily evade destruction. Survival does not guarantee truth. Yet, one way or another, our perceptions and ideas about reality (the underwater world) are completely bound up with survival, which is the ultimate test of their validity. The threat of annihilation lies at the core of our deepest concerns and our very concepts of reality. Like the submarine navigator, the best we can do is to speculate on what lies "out there" and hope for the best. We may throw enthusiasm and commitment behind such speculation, but there is no absolute assurance of its truth or effectiveness to guarantee survival.

But here is the paradoxical twist that makes the navigator's task even more perplexing: the interior working of the submarine itself can only be known as though it were part of the world outside the hull! The navigator's understanding of the submarine's functioning is simply part of the theory of the world outside the hull. The metaphor implies a "god's-eye" view of the submarine from outside; but this

is not available to the navigator sealed inside, whose task is to *create* such a viewpoint in the first place.[6] And *from* that point of view, once accomplished, we can see an anatomical reason for this situation: the human brain has few sensors within it; it is completely oriented toward the world outside the skull, which includes the body. After all, we know of brains and nerves through dissecting bodies, not through introspection.

I consider both science and religion (and also, as we shall see, art) to be alternative strategies that people have devised to cope with the anxieties arising from fundamental uncertainty. Perhaps this is how an anthropologist from the other side of the galaxy might view our cultural projects. The existential approach I propose is an attitude of suspended judgment toward experience, which is inherently ambiguous until the mind settles on an interpretation. Our normal thoughts and perceptions are tailored to be *decisive* in spite of imperfect information.[7] They are tailored to side-step the ambiguity that is the very source of holy terror insofar as no guaranteed course of action can follow. Everyone must face this dilemma in their own way, which always means embracing assumptions for which one must

[6] Here we reach the limit of the metaphor. The "navigator" has her own senses with which to perceive the inside of the submarine. But there is no such navigator walking around inside the skull.

[7] The digital revolution seems to reflect this fundamental need for decisiveness in the face of imperfect information. Despite the advantages of digitation, there are many ways that it can and does backfire in the modern world.

take responsibility. Often it means adopting some belief system, at least provisionally and sometimes prematurely.

It might seem a contradiction to prefer one framework to another (as I prefer science over religion) and at the same time to suspend judgment. Yet, one has to stand somewhere to have any perspective at all—any judgment to suspend. Choices can be provisional, continuing to take alternatives into consideration. (That tentativeness is actually the essence of science.) There is a long tradition of metaphysical theories in which consciousness exists in some non-material way that can survive death. Many people find satisfaction and comfort in such ideas, which may promise relief from existential anxiety. Personally, I do not find such views satisfying or plausible. My purpose, rather, is to present a view of consciousness and the self that is grounded in scientific materialism rather than religion or metaphysics, and to explore both the satisfactions and the limits of such a view.

CHAPTER TWO: Cause or Intention?

To understand consciousness, one must grasp not only its causes, but also its motivations and reason for being. People have devised two common ways of explaining things, of answering the question *why*. One is in terms of *cause*, in which one thing leads to another like toppling dominoes. This kind of description is essentially visual and third-personal, from a god's-eye perspective. It tracks interactions among things, as events distinct from the observer and from each other. The other way is to describe the *reasons* for which agents *do* things. This kind of description is in terms of *intention*, in which intelligent agents act and interact with the world and with each other for purposes that largely have to do with their well-being and survival. It is essentially muscular, tactual, and first-personal.

Intentions are processes occurring within living organisms and their brains. In the case of people, what we typically call free will is conscious choice, in which we are aware of our reasons or intentions; but much of our behavior is a result of *non*-conscious processes that seem to be causal—to "just happen"—but are nonetheless intentional. Science focuses on causal processes, from an observer's point of view. Because it views organisms as *things*, it does not concern itself with intentional processes or *agents* with their own point of view. Yet, it is precisely for this reason that science is unable to explain consciousness.

Traditional religious, spiritual and metaphysical teachings about the nature of reality typically involve the

intentions of conscious agents (gods, spirits, human souls), which interact with material things (including human bodies). From a modern perspective, one difficulty with such teachings is that the world thus seems to contain two irreconcilable kinds of entity: non-material intelligent agents and inanimate material stuff. Science seeks to eliminate this dualism by attempting to understand all phenomena in strictly materialist (causal) terms, ignoring the intentions of organisms and of scientists as conscious agents. But even that restricted view includes the task of explaining consciousness in those same materialist terms, a challenge which most scientists and philosophers today acknowledge to be unsolved. Religious and metaphysical thought may seek to eliminate dualism by asserting that everything can be understood in spiritual or mental terms. But that fails to account for the appearance of a physical universe in all its complex detail. If the material world is no more than an idea in the mind, why is it roughly the same idea for everyone?

Psychologically, we are used to this duality. We routinely deal with agents, human or animal, as well as inert things. We are used to thinking of "mind" as a basic category complementing "matter." From the earliest times, people embraced a concept of the soul or spirit as a kind of non-material and invisible agent that *inhabits* a body, rendering it capable of consciousness. It is this ethereal entity that is supposed to do the work of being conscious and is the essence of the person, not the material brain or some other bodily organ. It is even supposed to be capable of perception apart from the body, as in "out-of-body"

experiences. Presumably it survives the death of the body, continuing to have experience of some sort after brain death; in some belief systems it is reborn into another body. The concept of the soul is an intuitive and appealing way to account for much human experience. Yet, even apart from the troubling dualism, there are many logical problems with it. For example: if souls are recycled (as in reincarnation), how to account for the increasing number of bodies through population growth? Are new souls created for the surplus of new bodies—in which case souls are not eternal? Are some bodies born without souls because there is only a limited supply of the latter? I leave such conundrums to those who can take them seriously.

The problem I wish to focus on is rather the nature of consciousness itself. The concept of 'soul' offers no explanation of consciousness at all: the soul simply *is* conscious (a brute fact), whereas matter is not—and cannot be—without the participation of the non-material soul. In contrast, the scientific challenge is precisely to understand how matter itself can be conscious, without recourse to spiritual entities. That is the path I will follow here—with some modifications. The key, I believe, is first to understand how a material system can be an *agent*. Then, to understand the specific role that consciousness plays for certain agents, namely human beings.

Science currently attempts to explain natural occurrences in terms of cause and effect, in which intention and agency play no role. Since you are a part of nature, science would ideally account for your feelings, perceptions, thoughts,

and behavior ultimately in terms of the motions of molecules. (The nerve impulses in your brain are indeed charged molecules in motion.) In that view, it is not your perceptions, feelings, thoughts, and will which lead to your behavior but physical processes in your body and brain that cause your behavior and your experience too. These are in turn caused by other physical processes in the outside world, in an endless regression back to the beginning of time. Causal explanation as presently understood excludes agency—except, ironically, the agency of the scientist, who observes from outside and formulates the causal explanation. Yet, if science were to strictly follow its own reductive program, applied to itself, then scientific theories would amount ultimately to no more than the motions of molecules in the brains of scientists! A theory or idea, from that point of view, cannot be true or false, any more than a chemical process is true or false. It is simply another natural event.

The modern idea of causality works well for select phenomena in the inanimate world of things that do not have intentions or need to make choices. In particular, these are relatively simple phenomena that can be effectively described by mathematics. An example is Newton's laws of motion and gravity, which enable spacecraft to go to the moon and planets. This strategy does not work so well to account for the behavior of complex organisms, whose internal workings cannot be described by Newton's laws alone or by simple mathematics.

There is a qualitative difference as well, since causality does not account for purpose. Causal processes do no more

than passively transmit impersonal forces. One might describe the operation of an electrical appliance as a flow of electric charge through its circuitry—inside a computer, for example. But that would not explain the *logic* of the circuits, what the device is supposed to do or how it is to be used, the reasons behind its design and manufacture. These considerations have nothing to do with electric fields, transistors and soldered wires, but with the goals of the designers, makers, and users of computers. The same applies to organisms. You could explain the flow of nerve impulses in electro-chemical terms. But this would shed little light on the organism's behavior, which reflects its *own* goals, purposes, and reasons quite apart from those of human investigators and their ideas about causality. Unlike inanimate matter, the organism is an agent, with its own reasons and purposes. As it stands, there is no way to explain reasons and purposes in causal terms.

Thus, we cannot understand human or animal behavior and its motivations by appeal to causality alone. I believe that, ultimately, it is not possible even to understand inanimate systems in terms that exclude agency. For, the human observer is always part of the system observed, so that agency re-enters by the back door. Some problems of modern physics and cosmology involve the incursion of human agency within the causal worldview, especially in those realms furthest removed from ordinary experience. In many people's eyes, however, the most glaring problem is how to solve the mystery posed by consciousness, which is implicated in these other questions.

Now, if we wish to understand consciousness, its origin, and what motivates it, we need a concept of agency that is broader than what we think of as the agency involved in conscious thought and perception; for otherwise we will simply reason in circles. We do not know what it is "like" to be a given creature, or even whether some creatures experience anything at all. We do not know where to draw the line for which creatures to consider "conscious." Yet, clearly any creature interacts with the world in ways that permit it to survive and reproduce, for otherwise it wouldn't exist. This interaction is extremely complex, compared to the passive transmission of forces involved in the action-reaction of molecules jostling each other. But it is also of a different nature. So far as we know, molecules do not act on their own behalf, but only react "mechanically," with an energy transferred from the cause. They have no motivation. In contrast, organisms *do* act on their own, using their own energy, and are motivated to survive. If we wish to understand the behavior of organisms, we must understand what motivates them to act, regardless of whether they themselves are conscious of these actions and motivations. And this applies to understanding human behavior as well. We must allow, as Freud demonstrated, that we have intentions of which we are not normally aware. All creatures act intentionally, if not consciously.

To bridge the gulf between intention and cause would require a causal theory of motivation or, alternatively, an intentional theory of causation. Neither exists at present.

Ironically, the notion of the causal power of one inanimate thing to affect another inanimate thing probably entered human thought through the infant's early experience of willing parts of its own body to move. This experience supplied the model for the concept of *force*, as first developed in physics, which is the muscular exertion required to move other things. To note that objects seem also to affect each other, apart from one's own deliberate actions upon them, suggests a similar force or power expended by one thing to affect another. This is implicitly an animist notion, which projects human agency into the world. Hume criticized this (muscular) notion of causal *power* within things, dismissing it as nothing more than (visually) observed succession of events in time. That might seem like quibbling, but the point is that a notion that is grounded in subjective human agency (intention) is attributed to nature as something objective (cause), occurring quite apart from such agency.

Science opted historically to ignore this subjective origin of its concepts, and to eliminate the scientist's agency from its objectified vision of nature. By extension, this excluded the notion of agency within nature itself—even the obvious agency of other living things and human beings. But human beings (e.g., scientists) *are* agents in the natural world, who design experiments and create theories, in order to make use of the world at large for specific purposes. Agency and intention remain the human prerogative, formally outside the scope of science, even though scientists are part of the nature they study. This seeming dualism is exorcised by banishing the scientific

observer to a footing outside the system observed. We shall see more clearly in Part Two how this expedient renders all but impossible an explanation of consciousness within the current practice of science.

Science might deny that there is any such thing as free will, because it retains faith that human behavior can be given a deterministic explanation. But few scientists or philosophers would deny that human beings do have conscious experience, including the experience of willing. In the point of view that I will present, consciousness and will are intimately related: for, they both express *intention*, which characterizes the behavior of agents rather than the behavior of molecules. In other words, agency and intention are concepts far broader than the deliberate action or conscious intent familiar to us in our waking state, and different from the observed behavior of inanimate things. Intention, in this extended sense, is a fundamental notion required to account for the behavior of organisms, for our conscious experiences and acts, and for many of those non-conscious acts and processes that make up our lives.

To understand human behavior, let us look broadly at some of the intentions behind it. Culture at large serves as armor against the natural contingencies to which embodied creatures are vulnerable, and also against the underlying existential uncertainties that seem inevitable for a creature that is self-aware. Cultural practices can serve other purposes as well, such as to distinguish one group from another—*us* from *them*. But the overriding function is to

distinguish *us* from *nature*. For, nature can seem inscrutable, unpredictable, chaotic, indifferent or cruel. We are naturally at the mercy of its whims. In comparison, the man-made world—including the world of concepts—is reliably ordered and tailored to human needs. We live within its collective narrative and its cultural and technological products, rather than directly in nature. Furthermore, we have never fancied being mere animals.

People can be extreme and adamant in their beliefs, perhaps out of sheer need to adhere to a system of ideas that inspires enough confidence to override basic uncertainty. Religion, science, and cultural forms in general function this way, since they are systems ordered by that intent. However bizarre they may appear to an outsider, a basic purpose of diverse customs, rituals, and cultural practices around the world is to alleviate holy terror by setting one safely apart from nature. We build cities as literal shelters from the natural environment, but also symbolically to declare our independence from nature. We assert the *human* world in place of the natural one, because in it we are the masters. In the human world, potentially, we are not hapless creatures but self-created gods. Our identity lies not with the body that ends in the grave but with the consciousness that cannot imagine itself ceasing to exist. We identify with the heroic gestures that impose the human world as a bulwark against nature, mortality, the unknown, and the threat of meaninglessness.

The customs and rituals of other societies may seem strange to us and arbitrary. As outsiders, we may see little

inherent sense in them, with no more meaning to us than the gibberish of a language we do not speak. The lesson to draw is that there is no inherent meaning in the customs and rituals of our own collective either! The words of our own language, whose meanings we take for granted, are mere gibberish to someone else. Whether in language or in life, meaning does not reside in the forms and symbols themselves but in common agreement about how to use them. That agreement is an intentional act, if not a conscious one.

Is reality then devoid of *inherent* meaning? That is a trick question; for, meaning is not a quality residing potentially or actually in things. It is rather a capacity residing in *us*, the makers of meaning. Meaning exists only by convention and intention. Hence, nothing—not even human life—is *inherently* meaningful or valuable. By the same token, neither can it be inherently meaningless or worthless. Rather, meaning is a human phenomenon: it is up to us to *give* meaning and value where we will. That is an easy enough statement to make; but it is not so easy to stomach the full truth of it, or to live with that truth in all its implications. For, it takes the burden off external reality to *be* meaningful and puts it back on our shoulders as the creators of meaning and value. This burden can be very intimidating, especially since we are naturally conditioned to look outward to the world for every satisfaction, and to rely on it as the source of meaning and direction—much as we once relied on our parents.

One thinks of convention as agreement among individuals, for the sake of communicating and getting along. But

there is communication *within* the individual as well. There is a language even of unconscious thought, with its own conventions. The nervous system, after all, is a network of internal connections. Whatever the brain finds meaningful it has *invested* with meaning, in the way that natural language is invested with meaning, whether we are aware of this activity or not. Of course, like society, the brain can also change its conventions, which by definition are neither true nor false. They are written not in stone but in nerve and tissue. To the extent they are hard-wired within us, it is for biological reasons beyond the conventions themselves. The very idea of truth or reality is a habit we have formed because of our biological nature, which compels us to look at the world as real and necessary rather than as arbitrary, illusory, or a matter of convention. Reality is a fundamental category for us because if we did not take the apparently real external world at face value—and *seriously*—we would not have survived to be here thinking about it. It is for our own good that we experience the material world as real and certain things as meaningful.

To experience the material world as real is to acknowledge that it holds over us the power of life and death. That is the biological meaning of "realness" as a *quality of experience*, rather than as a *property of things*. As organisms, we are in a poor position to contest this arrangement, which is built into our genes and brains. (A brain that ignored it would likely not survive.) And yet the human organism can also know this about itself, and can to some extent temper its actions accordingly. While this "agreement" (to experience the world given by the senses

as real) is hardly conscious or voluntary, it is nonetheless intentional. And yet it is possible, and perhaps inevitable, for a self-conscious creature to question it.

If nature would compel us to view the world as real, how is it we may sometimes fail to find meaning in it? How is it we can become disillusioned (a turn of phrase that suggests indulging an illusion in the first place)? No doubt animals simply follow their instincts and perceptions, with built-in priorities shaped by nature. But human beings dwell also, both outwardly and inwardly, in a parallel world they have made themselves. We live not only in urban environments, with technology and all the accoutrements of civilization, but also in a world of abstractions and imagination that underpin them. We have conceived the *ideal* and the *subjective* as well as the real and the objective, the arbitrary and the abstract as well as the necessary and concrete. We have ideas about how things *should* be as well as about how they actually are or might be in future. We know that the seeming reality of the world is not the whole story. We know that to some extent we are ourselves responsible for how the world appears to us and for what seems to us real and meaningful. We even have the ability to *make* things seem real that have little to do with natural reality.

One is often advised that a "meaningful life" can best be found in service to some cause larger than oneself. I agree that this stratagem works psychologically to the extent that one believes in the cause. I point out, however, that this advice trades on our biologically inbuilt awe for a

natural reality that is indeed vaster than the individual and even the species. We are in the natural habit of looking outside ourselves for meaning and purpose, since our very existence depends on that external reality. We are also intensely social organisms, like other primates, who are finely tuned to the needs of others, to the group and its dynamics. The values behind these habits are ultimately a matter of biological and social conditioning, within which one may indeed find satisfaction in pursuing a cause or in serving others. Even this grounding, however, provides no ultimate psychological security. For, one is also at liberty to question the conditioning and the intention to find meaning in values that are biologically or socially determined. (Indeed, to think of it as "conditioning" already makes it questionable.) One might come to look with suspicion upon such meaning as no more than another arbitrary and empty convention—a spell cast by biology, one's parents, or society. Where one can be enchanted, one can also become disenchanted! And what does it mean to perceive something as arbitrary, but that it does not correspond to any intention of one's own?

This brings us back to responsibility for our choices, whether we are aware of our intentions or not. In Part Two, we will further explore the specific role of that awareness and how the self enters into this responsibility. For now, let us just consider that organisms do have intentions and makes choices, and are thereby deeply implicated in whatever they find meaningful or real. This portrait—of the organism as an intentional agent—is very different from the scientific portrait of the organism as a puppet of

causal processes. For humans at least, a key difference involves responsibility. The organism does not invent the environment external to it, of which it is a part; but it does have a hand in how it perceives and relates to that environment and how it shapes it. For the self-aware organism, this fact of grasping one's own participation can greatly complicate the perception of reality, implicating responsibility and casting doubt on what is taken for real.

The will to remove from nature and substitute a humanly defined world puts human beings in an oddly paradoxical situation. For, insofar as we rely on our natural conditioning, the natural world can at least be counted on as a wellspring of meaning built into our experience through biology. Creating our *own* world shifts responsibility for meaning to our human shoulders, and throws us back upon our own resources. The attempt to achieve certainty by redefining the natural world in our own terms can backfire. (The equations of economics do not work nearly so well as Newton's equations of motion, for example.) Our very participation introduces uncertainty into what could otherwise seem to be a straightforward perception of reality.[8] No doubt, this is why science excludes the observer from the

[8] Physics treats uncertainty two distinct ways. The classical *measurement problem* is that the initial condition (the input to an equation) always involves some error and thus uncertainty. This is not too serious for linear equations; but the catastrophic result for non-linear equations is "chaos." The quantum measurement problem is that the act of measurement itself changes the state of the system, introducing another uncertainty. Both reflect the gap between theory and actuality.

system observed, and the subjective from its purview, even while it redefines the natural world in its own terms.

Like science, religion also redefines the world in human terms. While science treats the world *as though* it were an artifact, religion considers it *literally* to be an artifact. Either way, by implication we too are mere artifacts, predetermined by our creator, whether God or nature. The religious notion of predestination (so dear to the Puritans who helped to foster early science) was fertile ground for the doctrine of determinism. The possibility that one's actions are *not* a matter of free choice may be a relief to some. If *everything* is simply God's will, then at least one is absolved of responsibility and the burden of choice. For others, however, the prospect of fate or determinism is a source of anxiety rivaling the anxiety over choice itself. An agent with supposed free will may agonize over choosing, but no less over the prospect of having no free will. What meaning can be found in human activity that is either scripted by God or fixed in advance by physical causes over which we have no control? Either way, one is then a mere pawn, not a free agent at all! Which is worse, the agony of choosing or the agony of having no choice?

The age-old idea of the soul's journey, the pilgrim's progress, suggests that the purpose of physical incarnation is to learn from the course of experience over many lifetimes. At least this presumes the freedom to make moral choices. But where is this learning to be applied? The idea of physical reality as a classroom to educate the

non-physical soul has the same defects as the notion of 'soul' itself. And one must ask, what is the point of this education if not to conduct oneself better in the *present* life?

On the other hand, as our legal systems increasingly reflect a deterministic worldview, the idea of personal responsibility gives way to blaming causes outside the individual's conscious control. One can then claim exoneration because, for example, one's genes were faulty, or because of a chemical additive in one's breakfast cereal. Causal determinism seems to get us off the hook of responsibility. But one cannot have it both ways; we pay for that leniency with despair over being meaningless cogs within a deterministic machine. From either a spiritual or a scientific perspective, meaning cannot be divorced from responsibility.

The goals, people, activities, things and structures that give meaning to our lives relieve us of the need to ask repeatedly, 'What shall I do today?' or 'Why bother getting out of bed?' This is one reason why the loss of a loved one, of a job, or of a personal faculty or skill can be so devastating: it leaves us at a loss of what to do with life, love and energy.

We grieve the passing of people dear to us, whom we miss. If they have died prematurely, we mourn also the tragedy of a life cut short, incomplete. The death of a child is especially poignant and tragic. It is utterly devastating for the parents, in part because it represents the defeat of an enormous long-term project they had undertaken. Death

negates our hopes and attachments. Thus, it can negate the meaning we had invested in those relationships and projects that heretofore had set the tone, the scene, the agenda for our daily lives. Through them, we knew what life is about and how our days would be passed. Without them, we are at a loss to know how to engage a future that seems bleak and uncertain. We carry on day-to-day, since bodies have their own momentum. But anxiety follows such loss, which is a loss of meaning.

Meaning involves choice—concerning which things to value, what to do. When we lose that which gives sense and structure to life, then we are faced all over again with fundamental choices that can be riddled with anxiety. The other side of this coin is that such choices are made in the first place partly in order to settle into a routine, to rid ourselves of the perpetual anxiety of choosing! For, this aspect of meaning lies in the stability it provides. We prefer to make choices that will last and not have to be renewed each year or week or moment. Human society is founded on this desire for stability and has conspired in many ways to make it possible. We make contracts for that purpose. But human society, like nature, is not reliably stable.

While all this is understandable and to be expected, there may be some benefit in consciously bearing it in mind. One can be grateful for periods of peace and stability. One can be grateful to the departed loved one—or to the lost job, the diminished skill, the abandoned project, the time run out—simply for the role they played in giving structure and direction to one's life, for filling the

need for meaning as long as they did. Understanding this can also help us better appreciate what we have *not* lost, the projects that have not been thwarted by external events or by losses beyond our control, the friends and relatives that remain, the time and energy we still have.

Meaning is the narrative we project onto a capricious natural and social reality, the structured story we attempt to impose on life. The narrative *works*, for brief periods in limited ways, during which life seems to conform to our wishes. (Even if not, it may conform to a perversely satisfying story about why it does not!) Meaning may seem to adhere for extended periods, thereby temporarily obviating choice and anxiety. We may be grateful for the reprieve, but normalcy is never something to count on. Loss reminds us that all is provisional and temporary, hence choice is always imminent. This is another way to say that consciousness is always required, since its job is to attend to change. It is only by chance (some would say by grace) that we can ever take things for granted.

Rather than count on reality to remain as we wish, following choices we hope will be definitive, one could deliberately renew choice moment by moment. We shall see in Part Two that a biological role of consciousness is to enable the organism to learn new programs—which ironically can then operate without the need for conscious attention! However, this consciousness is inherently free to give itself another role that does not thus put itself out of business. We can track and update our own choices, frame by frame renewing the meanings we invest as we go

along. We then know at each moment that we can change our minds, even as we know that reality may refuse to cooperate with the choices and plans we make. In affirming our own freedom, we acknowledge the independent "freedom" of the world to affect us. As a further demand on us, such awareness may seem like an exhausting chore. Yet, it is also a luxury that can help us grow. Consciousness entails greater freedom and a more comprehensive view of reality. It reflects and acknowledges how things actually are.

CHAPTER THREE: Existential Threats

Apart from the general uncertainty that permeates life, there are specific sources of anxiety that represent threats to our existence. Among these, obviously, is our built-in mortality. We know that we are going to die, and that death is a fact of life, which one might acknowledge intellectually without accepting it emotionally. While the biblical explanation of mortality is punishment for sin, today we can at least understand that life could not have evolved without it. Death is not the wages of sin but the price of admission to life. We live on the shoulders, so to speak, of all the species that came before us, ninety-nine per cent of which are now extinct. If it were not for sexual reproduction, complex forms of life would not have evolved and we would not be here. Evolution through natural selection depends on successive generations. Each generation offers a fresh opportunity to adapt by taking advantage of genetic variation. In an environment of limited resources, that means the passing away of older individuals to make way for new ones.

Many cells within an organism are not immortal. Some are pared away to shape the developing body. Some are even programmed for deliberate self-sacrifice, such as the cells of the immune system. The overall effect is that the organism as a whole has a limited shelf life. Of course, environment, accident, and individual genetic makeup also affect how long a creature actually lives. Though we are apparently programmed to die, we are also programmed to survive at least long enough to reproduce.

Recognizing a characteristic life span hardly means that human beings are content with a biologically imposed limit, which can always be cut further short by disease, mishap, or war. We understandably seek to prolong our lives and our consciousness. Technology, better sanitary and living conditions, and medicine have already extended longevity, but not always in an optimal state. Living longer means being old longer. We now typically live long enough to suffer from diseases that former generations never experienced because they typically died of something else first. Many people, especially in developed countries, now spend their last years in prolonged mental and physical decay owing to what have come to be known as diseases of old age. A normal waning of faculties has been exacerbated by the effects of an unhealthy modern life style, artificially bolstered by medical treatment that keeps people technically alive in a reduced condition.

The project to be liberated from death was first conceived in spiritual terms, as denial that death is the end of life. Most religions hold that consciousness continues after the death of the body; some teach that the body itself will be restored after death. While such beliefs may be no more than wishful thinking, the search for immortality is now pursued on several technological fronts. Medical research on senescence, genetics, stem-cells, nutrition, replacement of body parts, cryogenics, and so forth, promises to extend the life of the body indefinitely—at least for the few who can afford the procedures. On another front, there is the farther-fetched promise of downloading the mind into an artificial body or a renewed natural one;

or of uploading it to cyberspace where it can live forever disembodied. In Part Two, I will say why I think the quest for immortality is dubious on all fronts. For now, I wish simply to catalog mortality itself as the fundamental existential threat, a key human preoccupation and motivator.

There are threats to the species as well as to the individual. Just as an individual has a life span, so may a species. It cannot survive if the environment changes faster than it can adapt through the slow process of natural selection. This has been the fate of the overwhelming majority of life forms that have ever existed. From the very beginning, the earth has been beset by cataclysms that eliminated vast numbers of species and even genera. Some of these extinctions were global events. In its early days, the earth was highly volcanic and also regularly bombarded by debris in the solar system. Life managed to persist, reasserting itself in ever-changing ways. The earth has stabilized to some extent, but not entirely. Human civilization is the result of a relatively benign late period we take for granted, a brief hiatus between ice ages. The ten or so millennia of civilization are but a microsecond of a harsh cosmic history.

After personal mortality, therefore, next in line as existential threat is extinction of the human species or even of all life. This could come about through the sort of event that famously claimed the dinosaurs. An impact from outer space or massive volcanic eruptions could create a "nuclear winter" that would block vital sunlight for a lethal period. Other kinds of natural cosmic events that could

affect or destroy life on earth include instability of the sun, a nearby supernova, collision with a small black hole, runaway greenhouse effect or a return of "snowball earth." We need only look to our nearest planetary neighbors to see how narrow is the shelf of life on which we live. Mars and Venus are both similar to earth in size and distance from the sun, yet Mars has hardly any atmosphere and Venus is a poisonous inferno.

These are not things that modern people normally worry about on a daily basis. Our ancestors did not even know about them. Yet, they sometimes *did* worry, as evidenced by the concern over celestial portents such as solar eclipses and the appearance of comets. In part, medieval people were conditioned to be anxious by actual catastrophes, such as the plague and famine of the 14th century that wiped out half of Europe. In conjunction with their religious beliefs, such events could be interpreted as divine punishment, and portents could be interpreted as warnings. Christian eschatology looked always toward the preordained end of the world.

Next to the destruction of everything is the end of modern civilization. Our current portents are the signs of climate change and the emergence of new epidemics. Unbridled faith in technology is tarnished by the visible destruction wreaked on "the environment" by the sheer human presence, come back to bite us in threatening weather patterns and melting polar caps. The fact that most of the world's population is now concentrated in cities means our species is highly vulnerable to contagious disease. Social and governmental strategies to contain

epidemics could have long-term fallout for our way of life as grave as the diseases themselves. Pandemic may become a perennial concern exceeding terrorism. It is a further worry that civilization could crumble under the weight of chaos and collective panic.

Climate change or no, human presence has already caused mass extinction. *We* are the current global catastrophe, the apocalypse for many unfortunate species! Even if you are not religious, it is difficult not to interpret modern portents as warnings with a moral dimension. Given the background of religious traditions in which sin and guilt (or karma) figure so importantly, how can we not feel anxious? Regardless of how much climate change is a result of human activity and how much would occur anyway, we are faced with drastic alterations that will displace millions of people and cause untold political and social disruption, more famine and more wars. The concentration of populations in urban centers will continue to foster epidemics capable of shutting down civilization. Have we already squandered the resources that would enable civilization to survive a planet-wide debacle? Such things are a very real source of anxiety, whether or not we think about them consciously or feel personally responsible.

Since we no longer live in nature, but to a large extent in artificial environments, the very notion of "natural" disaster has been blurred. This, too, has a religious context. After all, we still refer to some events as "acts of God," meaning that humans should not be held legally or morally responsible. Was the flooding of New Orleans by Hurricane Katrina a natural disaster? Not entirely, if you

take into consideration that human beings may be partly responsible for rising sea levels and increasingly severe weather patterns; that the city is built on land artificially reclaimed and prone to flooding in the first place; and, that suffering was aggravated and prolonged by inadequate response from various agencies. Is a global pandemic an act of God? People in the Middle Ages might have thought so, but today we know that human behavior is largely responsible: conditions such as urban overcrowding and the massive and inhumane animal food industry. Such blurring points to an increasing sense of complicity in our own lot, which is the dark side of the program to control and exploit nature. If we feel victimized by nature, we also know that nature is our victim and that we reap what we sow. It points also to the folly of taking stability for granted.

We are hardly done with the angst of the Cold War and the spectre of nuclear holocaust. Plenty of missiles are still poised to launch, and the world is now even more full of hot-headed people. If we survived the Cold War, it may have been that cooler heads prevailed in a time closer to the remembered destruction that concluded the second great hot war. Despite the deadly struggle of capitalism and communism, the postwar period was inspired by the dream of a unified cosmopolitan world. Political demagoguery, and religious and ethnic fanaticism, seem to have shattered that dream.

Modern agriculture is a short-sighted practice that destroys the world's soils and water. The long-term effect of genetic engineering of food crops remains to be seen.

Demands on water tables continue to drain them, perhaps irreversibly; at the same time, to meet the demands for the energy of natural gas, fracking poisons remaining water tables. Desertification, industrial food production, and ever-greater concentration of people in urban centers make us more vulnerable to famines and pandemics. Whole populations are displaced because of war, environmental disaster, and poverty induced by global economic practices. Homelessness and unwanted migration mean that millions spend their whole lives uprooted, either in makeshift shanties and concentration camps or on the street. Perilous attempts of the displaced to find better conditions in other countries are resented there as intrusions that could destabilize local economy and life. Such things contribute to the anxiety modern people must face, even when events are far away. Feelings of impotence to solve such problems and loss of faith in political leadership only exacerbate despair.

Ironically, some efforts to reduce existential risks through technology give further cause to be anxious. For example, there has been much discussion in recent years about the potentials and dangers of artificial intelligence—a takeover by thinking machines, which might think very differently than human beings if they really "think" at all. Above all, artificial intelligence should remain a *tool* under human control, to serve human goals and values, for human benefit. Yet, it is questionable whether AI can have the capabilities that make it desirable without being fully autonomous and thus *beyond* human control. If there is a

key factor leading technology irreversibly beyond control (the so-called "Singularity"), it would surely be the capacity of machines to self-program adaptively, combined with the capacity to self-modify physically. While these capacities greatly enhance the power of a machine, they also render it essentially uncontrollable. The characteristic of organic life that has rendered it un-machinelike is its ability to reproduce and to self-modify (adapt). Re-creating these abilities artificially is a tempting goal—but one to avoid at any cost.

Nevertheless, some transhumanists laud the prospect of artificial life, since organic life on this planet is doomed to eventual extinction one way or another. Artificial life forms could possibly survive in a broader range of environments and indefinitely into the future. Their "thinking" could operate at the speed of electricity rather than the flow of ions in wetware. There is no guarantee, however, that this artificial nature would evolve consciousness, let alone self-consciousness, which are natural strategies to cope with the vulnerability of flesh. If the advantage of artificial replicators is to bypass such vulnerability from the outset, then their very robustness might also bypass the contest of natural selection that gave rise to sentience in the first place. They could dominate and even supplant natural life, without necessarily evolving the consciousness we cherish. Science fiction classically imagines an alien invasion from outer space. But AI could be the homegrown version.

On the other hand, technological growth and economic development in general are already out of the ordinary citizen's control, and even out of the hands of so-called

representative governments. The very fact that ordinary people have little say over technological development is a source of anxiety even as we blithely enjoy its benefits. These are a mixed blessing, as those can attest who struggle with computer updates and complicated modern appliances that soon break down because they have so many parts that can fail. The public of consumers may have a passive vote (and potential veto) in the marketplace over technological innovations; but they hardly have a direct input. Cell phone towers simply appear in your neighborhood, and communications satellites simply appear in the night sky—not because you have asked for them, agreed to them, or have even been consulted, but because it is assumed by those in actual power that you will go along with, and even welcome, anything that appears to be convenient and to represent progress. The fact that most technological innovation is driven by commercial profit does not inspire confidence that the long-term effects for humanity have been well-considered by our leaders, whether in government or industry.

The evidence that planets are abundant in the universe suggests that life, and even advanced civilization, might be abundant too. This naturally raises the question: if so, then where are they (the aliens)?[9] Of course, despite *Star Trek*, the distances and logistics of space travel may be insuperable. But another answer could be that high-tech civilizations may be inherently self-limiting or self-destructive, stabilizing or perishing before they achieve

[9] This is known as the "Fermi Paradox."

long-distance space travel. We may be currently experiencing the self-destruction of our own technological civilization, even while on the brink of space travel. It remains to be seen (by future generations?) whether our human world can survive its troubled adolescence. Whether it can mature socially and morally beyond its apparently inherent violence and rapacity. Life may be terminal for the species, as it is for the individual.

While religious faith serves in many ways to assuage doubt, it can also aggravate it. Many religions consider their adherents to be chosen people, earmarked for salvation. Outsiders risk eternal damnation as well as persecution in this life. But even for insiders, salvation is hardly unconditional. Whoever can be saved also can be lost. The protestant religions came historically to rely far more on interpretation of scripture and personal faith, putting a heavy burden on the individual. What you *believe*, as much as what you do, determines your future after death. But how to know what to believe in a world of competing credos? Because the Bible (or your spiritual leader) tells you so? The buck can only pass so far, and then one is alone with the responsibility for one's choices, even the choice of what to believe. Securing an eternity of future life in heaven seems an unbearable responsibility for a mortal creature that lives only a few decades and is driven by unsavory instincts!

Just as a child feels a sense of security under the umbrella of parental authority, so the religious believer may take refuge in the authority of spiritual doctrine or in

the notion that all transpires according to divine will. Yet, some religions hold even that the destiny of the soul (the ultimate reward or punishment) is predetermined: only elect souls will be saved according to a destiny one can do nothing about—whether through good deeds, prayer, repentance, nor even belief. This idea epitomizes the conundrum that fate, while it relieves one of responsibility, is ultimately disempowering. Uncertainty over one's pre-ordained fate can only mean more anxiety.

The modern version of fate is determinism. Ultimately, it means that what you do and experience today was predetermined at the time of the Big Bang, whose effects continue even now to set the future. This is often interpreted to mean that events inside and outside your brain are responsible for your experience and behavior—and therefore that *you* are not. Like the religious doctrine of fate, the scientific doctrine of determinism can seem to absolve one of personal responsibility—but at the cost of free will. If one can take comfort in thinking that nothing can be one's fault, the thought that one has no power whatever to change the course of events can be depressing.

However, the notion that the world is a sort of machine is an outdated metaphor. It survives because of the effectiveness of mathematics at describing simple physical systems that nominally resemble machines. Yet, it is complexity, rather than simplicity, that characterizes organisms—and perhaps the rest of the universe as well. In truth, it is mathematics that is deterministic, not nature. Machines are deterministic because—like equations—

they have precise, well-defined components and operations. Like stories, their output is fixed by design. Unless you are a creationist, however, the universe is not fixed by design. It is not a machine, nor are the human organisms within it. Science is still under the sway of the mechanist metaphor, all the more in the age of the computer—the ultimate machine. But mechanism is *only* a metaphor, a way of viewing things. There is no reason to despair over determinism as though it could be literally true. Nor is there any reason to take comfort in it!

Of course, people are anxious about more immediate things as well. We worry about family and friends, our health and financial status, whether we are achieving our life goals, whether we did or said the right thing in a given situation, and so forth. At the core of many such concerns is self-esteem—how we judge our performance and are judged by others. We want to be the good guys, even heroes. This harks back to Kierkegaard's focus on choice and possible guilt as the source of anxiety, and is perhaps the core issue in the clinical diagnosis of neurotic anxiety. A modern antidote for anxiety, whatever the source, is alcohol and drugs—whether pharmaceutical or recreational. However well that solution works to relieve anxiety, chemical self-manipulation is paradoxical. It raises the question: *which* self is medicating what other self? Who is relieving or deceiving whom, and why? If I doubt my self-worth, which *I* is even qualified to judge it?

Anxiety reflects uncertainty about what to do and fear of doing the wrong thing. Sometimes doing *something*—

even in error—may at least break the deadlock and yield new information. One can learn from mistakes, at least if they are not fatal. Though one agonizes over past choices, at least one can try to do better in future. On the other hand, sometimes it is best to do nothing in the absence of a clear course of action. This doesn't get one off the hook, of course; one can judge oneself for *not* acting, as well as for doing the wrong thing.

Alternatively, one can review the values presently held that lead to harsh self-judgement in the first place. To judge oneself, after all, is to evaluate one's choices from a perspective that is unavoidably biased. (For a neutral observer, self-esteem is irrelevant; one is neither good nor bad, but simply is.) Some values one presently holds may not seem appropriate in review; they may not even be truly one's own, but inculcated by others for *their* purposes (so that children will "behave" and citizens be law-abiding, for example). Furthermore, one might agree with the value in question while disagreeing that it should be enforced by the experience of feeling guilty. Such questioning self-examination is part of the process of becoming a more conscious and responsible person. The discomfort of anxiety can motivate this process in the first place, which may or may not free one from it. The liberty to doubt oneself may seem a curse rather than a blessing. But, the alternative is to not have that liberty, in which case one would be no more than inert furniture of the cosmos.

CHAPTER FOUR: Defense

Much human activity serves to ward off existential anxieties, even while it creates new ones. What we do in the name of relief can also aggravate real threats. This only complicates a fundamental truth: all of human culture stands not only as a bastion against nature but also as a psychological defense against holy terror. This is not to deny that our actions and creations have other motivations as well; neither does it deny that they can be counterproductive. That said, let us look at some of the ways people have found to evade holy terror and to affirm life despite it.

One can sidestep anxiety by indulging feelings and activities whose biological grounding puts their meaning and reward seemingly beyond question. Sexual pleasure is something we can usually count on as a temporary antidote to angst. The same goes for bodily pleasures such as eating. In general, what is good for us *feels* good, even if the reverse is not necessarily true. In our inner vocabulary, feelings of pleasure stand for states which, through natural selection, the organism has come to deem desirable. Physical pleasure also affirms the body's vitality and thus directly denies mortality. This is especially true of sex, whose biological function is to produce new life. But it is also true of eating, whose biological function is to maintain that life; of sleep, whose function is to refresh it; and of socializing, whose function is to reinforce the bonds that support it.

Yet, part of the human prerogative has been to divert biological functions to serve broader interests. Hence, we enjoy sex apart from reproduction, for its own sake or as an expression of love. We enjoy food for its taste and artful preparation, and as an entertaining social ritual. Eating literally and figuratively fills emptiness. Sexual release can reduce tension, and intimate physical contact is soothing and reassuring. The loosened tie of sex to reproduction broadens the sexual experience to include masturbation and kinky sexual practices, as well as homosexuality.

By their very intensity, all sexual experiences can serve to counter or mask anxiety. Even self-inflicted pain can be pleasurable or tension-relieving for similar reasons, especially when it serves to demonstrate the body's robustness by testing its resistance to token stress or damage. (Of course, the experiment can backfire if the damage goes too far; the body may not be as robust as fantasied!) Physical risk taking and dangerous sports also serve to attest one's invulnerability. To court death is to challenge it directly, to bring it under management and assimilate it psychologically by making it intentional. Perhaps this accounts for the enduring appeal of war! Physical culture and exercise are socially-approved paths to well-being and vitality, as well as ways to remain attractive to others. They are also part of the modern obsession with youthfulness and vigor, which aims to defy aging and mortality.

Sexuality is such a human obsession in part because it is genetically ingrained. More significantly, it is a means to transcend the physical isolation of embodiment. Likewise,

sociality is compelling in part because it masks the holy terror of isolation. Our natural sociality compensates a natural solipsism. For, the very fact of self-consciousness encapsulates us in our own private world. Physical embodiment separates us from others whose thoughts we cannot read, whose sensations we cannot feel. The body is a prison to the extent its boundaries separate us from other bodies and their minds. It is perhaps our greatest yearning to bridge the gulf with the *other*, even as our worst behavior maliciously denies value to others and sometimes deprives them of life. Through sex and the sociality we inherit as primates, we achieve a satisfying but fragile illusion of solidarity. Mortality contradicts that sense of belonging, since our participation in the common reality is but temporary and conditional. Death exiles one from the tribe.

Apart from the genetic basis of altruism, "love" remains a curiously ambiguous ideal. In its name, people speak indiscriminately of quite disparate things. The mystique of romantic love is famously celebrated in western culture, raised to mythical level. Christianity has made much of altruistic love as an ethical principle and a moral force. Many would claim that the experiences of loving and being loved are the most rewarding possible. Yet "love" could mean anything from the romantic passion or obsession that overwhelms the ego, to the parent's love for the child, to acts of heroism and self-sacrifice that transcend a limiting identity. I do not dispute that love is compelling and fulfilling. Rather, I point also to its capacity to alleviate

holy terror. While I do not disparage the ideal of selfless love, I point out that no love is truly selfless that has an ulterior motive, even the motive of finding meaning or fulfillment. As with sex, the sheer power of emotion involved can override anxiety and seem to invoke instant meaning. Love as *caring for*, however, is not an emotion or sensation, though it may be accompanied and prompted by such feelings. It is foremost a caring behavior. It may be fulfilling, but that is not its point. The associated feeling is simply a reminder to act in a certain way. The heady emotion of "being in love" seems to transport one to a transcendent state, freed temporarily from ordinary concerns. When that state is the *goal*, however, it is tempting to use the beloved merely as a pretext to have the experience. But whoever can fall in love can also fall out of it and be cast into the corresponding lower depths, where the intensity of negative feeling can serve just as well to divert holy terror. It is no coincidence that so many popular songs are about lost or unrequited love.

Addictions and compulsions of various sorts can counter anxiety for similar reasons. These may include ritualized behavior, sexual fixations on body parts, and obsessions with particular individuals or activities. The very fact that such experiences are compelling gives them power to bypass anxiety when reason and reflection are unable to do so. They are compelling because they reflect programming at a deeper level than conscious intention. While this has the disadvantage that they resist control by conscious will, it has the advantage that they can displace feelings of anxiety or prevent anxiety from becoming

consciously felt. Of course, the addictive or compulsive behavior involved can ironically lead to consequences that arouse further anxiety, to concern over being out of control, or to self-destructive behavior that poses an existential threat.

Childhood trauma, and traumatic events in later life, can make one anxious that such events could recur or that painful disturbing memories could surface unwanted. In many cases, the trauma was literally life threatening, and so its memory brings up fear. A child cannot help but feel its survival is threatened by some adult behavior. The victim may feel helpless to avoid such feelings even in later life. The repression of painful memories, including denial of past traumatic events, is a classic etiology of neuroses, on which psychoanalysis was founded. Yet, denial is a broad psychological defense. Sometimes it serves to cover guilt, or to absolve one of responsibility for real or imagined complicity. This is closely related to blaming and scapegoating, as a desperate means of deflecting guilt and of clinging to self-esteem through a posture of innocence or victimhood. It is practiced by whole societies as well as by individuals.

We are motivated to avoid the unpleasant experience of guilt by trying to behave according to moral precepts we have introjected and the expectations of others, to which we are sensitive as highly social creatures. But we also counter it simply by denying that we have done the wrong of which we are accused by inner or outer voices. A lot of internal self-talk involves self-justification. This is a defense against an internal prosecutor; but it may also be a

rehearsal for defence against potential external accusers. In any case, nothing is as effective as guilt or shame to elicit anxiety, since our very sense of self-worth is at stake. In general, we are willing to go to great lengths to maintain self-esteem. These lengths include all that people do to enhance their status in the eyes of others, which in our materialistic society tends to be measured by wealth. Yet, self-esteem is ultimately a relationship one has with oneself, not with others and not with material goods.

Creative expression is a time-honored avenue to self-esteem, which others too may value as a positive contribution. Art has always been important to people, not only as a cultural product, but also as a meaningful activity. The same may be said for many worthy endeavors, especially when they benefit others. There is nothing to disparage in creativity, doing good, or contributing to society, which are far more admirable ways to seek meaning in life than merely accumulating wealth, whether or not they bring recognition. I simply point out that they also may serve to alleviate anxiety or to mask an underlying sense of futility or unworthiness. While cynicism is no reason to refrain from worthy goals, it is important to be clear about one's motivations.

Human beings lay claim to considerable freedom of where to put their energies. Despite that nominal freedom, we tend to engage in a narrow range of activities, many of which are understandably related to survival. Though some people are well enough off that survival should be the furthest thing from their minds, they too often tend to

embrace the conventional goal of making more money. Other standard goals include marriage, raising a family, pursuing a career, making a mark in the world, writing a book, etc. While all of these are normal aspirations, pursuing them happens also to bolster self-esteem and serve as defense against internal nay-sayers. Keeping busy at *any* activity is a primary way to ward off feelings of anxiety, futility, guilt, unworthiness, negativity, and meaninglessness. Engagement of any sort tends to preclude thoughts about mortality and existential despair. It can assuage anxieties about self-worth, especially if the activity can be viewed as an accomplishment or a positive contribution.

We live by habit and routine. *Systems* structure our lives, eliminate the need for constant decisions, and establish a stable environment we can count on. This reliability is the enduring appeal of mechanization, standardization, automation, business, law and bureaucracy. Machines are systems people have defined and devised for specific purposes; they are not, in principle, subject to the uncertainties that inhere in nature. Because they are made of natural materials with their own limits, they can wear out and break down. But the machine as an *ideal* is eternal and *reliable in principle*. It is this timeless ideality that we count upon in more abstract inventions, such as legal systems, organizations, constitutions, protocols, procedures and algorithms. These all involve doing it "by the book." While reliable in theory, such formulas depend on unreliable human participation; changing circumstance may reduce their effectiveness or make them obsolete. Yet,

in essence they are products of definition, which is both their advantage and their menace.

The philosophy of mechanism is the idea that nature itself is a machine. While literally untrue, this idea expresses the wishful thought that nature should be as reliable as a machine, which can be captured in an equation (a system). It has profited science in many ways to make this assumption. Some natural systems that have been re-defined mathematically as simple do indeed behave like machines—for example, the solar system. However, applying this type of thinking to more complex systems, such as organisms and ecosystems, has proven misleading and short-sighted. It is problematic not only scientifically but also as a general attitude toward the natural world. It aspires to an inappropriate ideal of reliability and control.

When applied to social systems, it is a double-edged sword. Except in experiments, human beings cannot force nature to be machinelike; but they can coerce other human beings to behave like machines. Human interaction can be systematized, regimented, forced to conform to an idea or ideal. People are receptive to this regimentation, cooperating with it, to the extent they prefer environments that are stable and predictable, machinelike. This compromise of freedom for the sake of order and stability is part of the social contract. Like a machine, a contract is a fixed arrangement, stable at least for the time that it is honored.

Like nature, however, society continually changes. A contract, political system, government, or particular way

of doing things will eventually become outmoded and burdensome. More insidiously, some imposed changes, ostensibly designed to make life easier, perversely have the opposite effect.[10] There is a general growth of regulation, bureaucracy, policing, surveillance, and wasteful consumer packaging in the name of safety. Yet, the modern catchword of "security" no doubt reflects an increasing sense of *in*security. There is a general economic shift in developed countries away from employment in manufacturing. On the one hand, this translates as more white-collar jobs—in bureaucracies, whether governmental or corporate. On the other hand, it means unemployment or menial service jobs that have not yet been automated. It also means increasing dependency on overseas trade, when a society no longer produces its own consumer goods. Such social developments can be further sources of anxiety.

Religion has been a traditional bulwark of meaning and a defense against the threat of nihilism. Yet, *any* ideology or system—even faith in science or technology—can serve as a defense against holy terror merely by asserting its authority. Religion may be especially suited to a sophisticated primate whose family structure reflects the prolonged dependency of the infant on its parents. The cosmic parent, from whom we would like all blessings to flow, could be

[10] Computer users are familiar with the irksome need to keep abreast of constant upgrades of their software. Many of these purported "improvements" represent little more than the need of programmers to remain employed.

the heavenly Father or (before patriarchy) the Great Goddess as the mother of all. It can just as readily be the State or the capitalist economy. Human beings have never outgrown such parental dependency, but have used their skills at abstract thought to project it into the sky or the earth, beyond the grave, or onto their worldly leaders. In the next chapter, we will look in more detail at how cultural expressions such as religion, art, and science aim to open us to deeper truths of existence and at the same time shelter us from them, ironically sometimes putting us at greater risk.

CHAPTER FIVE: Culture as Compromise

Culture, in the broad anthropological sense, is a strategy to make sense of experience, to create order out of chaos, to deal with holy terror. That includes the cultural forms we call religion, science, and art. Culture assimilates the raw world to human terms. It attempts to reduce elusive natural reality to well-defined concepts. Yet, all such terms can only be limited and finite. No matter how sophisticated our ideas and creations, reality is not obliged to conform to them. Life is full of surprises, of things we did not invent or anticipate. It is this very independence from us that makes the world real rather than merely a collective or personal hallucination, dream, invention or story. There has always been an unknown that escapes the confines of our definitions and is a source of amazement and bewilderment. Sometimes it is called the Great Mystery. There has always been uncertainty about how to relate to it.

Like the brain, culture functions to mediate experience. Collective knowledge and practice empower humanity in the face of our vulnerable plight in nature, creating an alternative world more to human taste. This is not the found world of nature but the man-made world of civilization, with its artifacts, knowledge, and customs.[11] It redefines nature in terms specified by human beings—whether scientists or priests, engineers or entrepreneurs, artists or

[11] See my earlier books, *Second Nature: the man-made world of idealism, technology, and power* Left Field Press, 2006, and *The Found and the Made: science, reason, and the reality of nature* Routledge/Transaction, 2016.

art critics. Using natural materials, and perhaps following a natural drive, culture attempts to remove us from the natural environment and from natural conditioning.

Culture is ironic in another way. It consists of heroic efforts to confront and master the unknown; yet it also serves to cushion the inevitable blow of that confrontation. Science, art, and religion are quests to unravel the Great Mystery. At the same time, they are strategies to evade the holy terror that mystery inspires. Thus, each unwittingly compromises its primary directive. Let us try to understand the nature and inevitability of that compromise—and to grasp that, though unconscious, it is *intentional*. For, like the mind, culture serves as a protective filter. It is a compromise between raw reality and human need, between pure object and pure subject.

Freud's notion of *compromise formation* is helpful here. This is the idea that an impulse can be deflected or deformed by competing impulses, which results in a distortion, diversion, perversion, or dilution of the original intent. This is how Freud explained neurotic symptoms. The compromise is a surface manifestation (a "symptom"), which both reveals and defends against a deeper psychological stratum.[12] Whether personal or cultural, the strategy not only casts the mystery of existence in its own light, but also conditions our responses in specific ways that help us deflect holy terror. It skews how we view the human situation—if not through rose colored glasses, then

[12] The effect might also be described in physics terms, as a vector resultant of combined forces. Or, in philosophical terms, as a dialectical process that synthesizes opposing elements.

through the narrowing filter of scientific theory, religious theology, academic philosophy, economics, esthetics, and so forth. In other words, an important aspect of cultural enterprises is that they serve as collective psychological defense mechanisms. In its own way, each area of cultural endeavor mediates, conditions, compromises, perverts, disarms, or obstructs the quest for the Great Mystery and inoculates us against holy terror. Most importantly, each achieves this compromise by *defining* reality in its own narrowed terms and thereby *limiting* possible experience. The ancient Taoists cautioned against this aspect of thought: the Tao that can be named is not the Tao. The Hebrew scriptures gave mankind dominion over nature, with the right to name the creatures but not the right to name the Creator.

Religion neutralizes its quest for truth by institutionalizing it. The Christian church that began as small clandestine gatherings grew into a state religion, a priestly hierarchy, a worldly form of patriarchal government, a quest for power. Dogma and ritual then overshadowed inquiry, channeling natural wonder into standard credos.[13] Corruption, wealth and luxury defeated Jesus' message of simplicity and love for one's fellows. In the Islamic world today, as in the medieval Christian world, holy wars and repressive inquisitions are still waged in the name of godliness, brotherly love, and personal salvation. How to

[13] The Nicaean Creed was literally a compromise between sects, enforced by Constantine for political reasons.

explain such ironies?

The world is fundamentally uncertain. When it is beyond immediate control, the most direct way to make it *appear* certain and controllable is to simply *declare* what it is. This is the function of dogma, with its unconditional claims about what exists and how reality works. Such confident assertions do not foster an attitude of humility, nor a cautious approach to the unknown. Quite the contrary, theology responds to the need for certainty by literally marching in with the presumption of absolute knowledge. The religious answer to holy terror is holy doctrine, which is sometimes enforced by a reign of political terror in the name of truth.

The need for absolute truth does not allow for disagreement. Yet, people do, of course, differ widely in their beliefs and claims. While natural reality and a similar biology are what we all have in common, no one perceives reality in exactly the same ways or concludes exactly the same things from experience. This differentiation is how a person or a group establishes their identity. Males in particular seem prone to test their own ideas and opinions against those of others. The natural outward focus on external reality, which is inherently complex, seems to train us to split hairs—all the more when the realm concerned is not tangible. Add to this the natural tendency toward in-grouping, and you have a recipe for contention, which results in a proliferation of conflicting groups. What belief systems and the groups that embrace them do have in common, but rarely admit, is the goal to relieve holy terror.

Scientists, at least, recognize nature as a common interest, and mathematics as a common language; they have agreed on how to disagree civilly, by allowing nature to have the last word as arbiter among disputes. But, when unconstrained by rules for what constitutes evidence and a protocol for evaluating it, the mind has unbridled freedom in what to believe and claim as true. There is no way to test religious doctrines, or the reality of the objects of religious belief, as there is in science. Whether religious or political, such belief can only be self-confirming when nature cannot confirm it; when common sense is not allowed to discredit it; and when the community of believers does not allow dissention. In the name of truth, sadly, people release themselves from common decency and civility as well as from common sense.

In the Middle Ages, natural inquiry was channeled into theology, and more broadly into scholasticism. This is a style of thought that referred less to nature directly than to the ideas and writings of other (male) thinkers. Without grounding in direct experience, such scholarship was a matter of hearsay or arbitrary whim. It was an academic gossip about mythological creatures or angels dancing on the heads of pins. It was materially inconsequential; yet, anyone straying too far from accepted doctrines could be prosecuted for heresy. While science displaced medieval scholasticism, giving us a modern creation story, it carried on this compromise of natural inquiry in subtler ways.

Science reconstructs the raw natural world as an idealized conceptual realm. Like religious doctrine, the

scientific model is a human artifact. Like religion, science ignores its role in creating these artifacts. While religion pretends its doctrines are dictated by God, science pretends its laws are dictated by nature. By focusing exclusively on the external world, science avoids the entanglement of subject with object that is the root of uncertainty, in science as in life generally.[14] The religious response to uncertainty is theology; the scientific response is theory. Both are ways to cope with the inscrutable mystery of existence, the holy terror of being, by substituting for the unknown a knowable representation.[15]

Science has the advantage that its vision of nature maximizes control of the natural environment. It has proven superior to religion as a way to harness nature to human purpose. (Technology works better than prayer to manipulate raw materials.) Yet, science does not correspond to all human purposes or respond to all human needs and desires. It does not give us immunity to holy terror. It focuses on what people can do to improve their knowledge and their material lot, which does not necessarily leave them feeling more secure. Despite our most valiant efforts to be certain, scientific knowledge is always only provisional. It gives the appearance of truth by dealing with

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[14] Modern physics reifies entanglement as a purely physical phenomenon: an entanglement between objects, purportedly independent of the subject.

[15] Idolatry is the substitution of a knowable representation for God, whether iconic or written. This is a matter of *relationship*, not simply of visual images. Thus, a proscription against visual representations does not exempt one from idolatry, since there may still be mental images evoked by the written word.

well-defined constructs in place of naturally ambiguous realities.[16] This offers a false confidence, since the reality (unlike the theory) cannot be perfectly known. Quantitative modeling allows projection into the future, but this has its risks. Because the model can never be perfect, our technological projects may have unforeseeable consequences, our projections can be inaccurate. Even our literal machines break down, and often do not work as well as expected.

Science aims to describe the natural world "objectively." That means to describe the world as it "truly" is, paradoxically apart from any human description. Science transforms the world in thought and also in deed, through technology. It serves as a manifesto of our society, with its faith in progress, specialization, and experts. Western secular society endorses the rationalism and goals of science to the extent it relies on the power those afford. At the same time, the proliferation of pseudo-information in social media has led to doubts about scientific expertise and the role of experts in society. Nevertheless, modernity is the period and mentality dominated by the dogma that nature itself is a machine that can be perfectly known and controlled. Such a dogma can have dangerous consequences that add to our anxiety. While either the religious or the scientific worldview can be comforting, the antagonism between them, and the dividedness of society, further that anxiety.

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[16] See my book, *The Found and the Made: science, reason, and the reality of nature* Transaction/Routledge, 2016

The early scientists usurped the divine creativity, which alone had been thought to determine what exists. Theorist displaced theologian while the scientific creation story displaced the biblical one. Scientists took it upon themselves to interpret the "book" of nature as though it were a blueprint. By careful inspection, the Creation could supposedly be reverse engineered in such ways that humans could think the very thoughts of the Creator and walk in divine shoes. In a parallel manner, artists explored the creativity once reserved to the gods, first in order to depict and celebrate divine glory, but eventually to appropriate it for themselves and for the human cause. Whereas science gained effectiveness and consistency by excluding or denying subjectivity, western art embraced it. Like religion, it now serves as a counterpoise to the rationalism of science, though more innocuous. However ineffectually, art is a force in modern society to re-establish balance in a goal-oriented world dominated by practicality. Art presents a different vision of intelligence, which celebrates the subjective and affirms the sensuous in the shadow of so-called rationality. Its playfulness and gratuity counter the seriousness of both science and religion.

Yet, art has its own peculiar ways to disarm holy terror. It does this, for example, by vaunting the human world and depicting the natural world as domesticated. It does it also by promulgating the mystique of artistic creativity. Representation in painting literally transcribes reality, brush stroke by brush stroke, affirming our native

cognitive power to tame and remake the world. Just as science redefines the world in mathematical terms, and religion in theological terms, art redefines it in esthetic, symbolic, or formal terms.

Even when representational, art compromises its own mission by channelling attention toward favored cultural themes. When not overtly religious, these have often been mythological or historical references, pandering to an essentially conservative elite. Though sometimes concealing a symbolic meaning critical of the social order, at face value much of this imagery directs attention away from current social realities, to reaffirm vested interests. Of course, within the last couple of centuries, there has also been art with explicit social content, when the message overshadows formal concerns. But often such work is judged inferior by the art establishment if it does not sufficiently engage the viewer in the currently defined esthetic terms. It may be dismissed as didactic, amateur, unable to please the discerning or withstand the test of time. Though it may depict political revolution or express a revolutionary sentiment, it may fail to be sufficiently "original." That is, it may not break with artistic convention in such a way as to satisfy the modern art world's expectation of perpetual, though trivial, revolution.

Like religion, art fails in its mission to confront the Great Mystery largely because it has been institutionalized. Plato had overestimated the power of art, fearing it could endanger the foundations of the state. While individual works of art might have a subversive intent, art functions overall as an institution to maintain the status

quo. This is hardly surprising, given that artists have traditionally been employed by wealthy patrons, the church, or the state. Renaissance artists, for example, had to work within the context of the political, social, and religious messages and themes their patrons hired them to convey. Their only way to dissent, or to express a different sentiment, was through the formal or graphic elements of the work. While fulfilling the literal obligation of the contract, the artist could express a different or even contrary intent through style and treatment of the given subject. This motive for innovation eventually gave way to change for its own sake or for the sake of notoriety. Thus, form can reinforce, contradict, or supersede content.

Today's high-art world is big business, a branch of the investment economy. Even at a more plebeian level, an individual art work embodies some degree of compromise between the artist's vision and the prevailing marketplace dynamic, which limits its expression and reception.[17] One sees this directly at work in the ritual of the gallery vernissage: a cocktail party to celebrate the opening of an art "show." However earnest, moving, or disturbing the artwork might be in another setting, received in this commercial and social context it is reduced to a consumer product for sale. It becomes the subject of party gossip, a backdrop for a certain prescribed form of sociality. This glibness sets the bar of expectation regarding what art is supposed to be. Art often thus functions as little more than

[17] It is also, of course, a compromise with the properties of the materials.

entertainment or decoration—no matter whether it is romanticized in lofty *artspeak* or is denounced as ugly, shocking, and vulgar. For, the literal meaning of entertainment is simply "to hold between." The art consumer is thus innocuously entertained. The artist, too, is entertained by the studio experience of endless variations on themes and the sheer delight of playing with materials. Cinema is the modern paradigm of entertainment—and the monumental art form of our age. In the gallery, museum, or studio—as in the cinema house—we are momentarily held between birth and death, suspended trivially from more pressing concerns.

CHAPTER SIX: Escape from Anxiety

We live, it is said, in an "age of anxiety."[18] Concerns about existential threats are reflected in a plethora of disaster films, whose themes include collision of the Earth with asteroids, geological cataclysms, alien invasions, ecological catastrophes, takeover by artificial intelligence, global pandemics, genetic manipulation, nuclear terrorism, war and civil war, media disinformation, big-brother surveillance and sundry dystopian futures. Even the best of worlds cannot be free from uncertainty. Even in the absence of threatening events or circumstances, life is still unpredictable, followed predictably by the grave. Specific threats and neurotic anxieties simply restimulate and magnify an underlying primordial angst. Given that panic is fertile ground for further social dysfunction, reason tells us to remain calm. But how does one do that in the face of real menace?

Kierkegaard's book, *The Concept of Anxiety*, deconstructs the concept of original sin. Recall that one is anxious basically when uncertain what to do. Kierkegaard is known as the first existential philosopher. In the mid-19th century, "existence" was understood in a Christian context. Anxiety, therefore, was identified with "hereditary" sin—a human condition of willfulness flaunted in the face of divine will.

[18] The 1947 title of a poem by W. H. Auden.

In modern times we might think of divine will as genetic determinism. We are conscious of living in a world with rules—whether dictated by God or by nature—and one of those rules is our inevitable demise. From this point of view, original "sin" is the rebellion against nature's biological dictates, including mortality. It is hereditary because we are born into the same mortal and abject condition, generation after generation. Human beings will not cease to be anxious about death until liberated from generation itself, if even then. To escape from the built-in limits of biology is a modern transhumanist project; yet it reflects a broader ancient dream to be self-creating and self-determining, no longer under nature's thumb, let alone God's.[19]

A first approach to mortality was simple denial, asserting that the death of the body is not the end of life. Technological society is now perhaps in the bargaining phase,[20] in which we attempt to use natural principles to overcome natural limits and vulnerabilities, such as disease, in order to free consciousness from its dependence on the body. Hence, the project to completely map functions of the brain, in hopes of duplicating them in some more robust medium such as silicon. Hence also the project to create consciousness artificially in a robot or computer; or to upload a person's consciousness into a new

[19] The concern in Genesis is that Adam would partake also of the "tree of life" and become immortal.

[20] Cf. Kubler-Ross's stages of grief: denial, anger, bargaining, depression, and acceptance.

body, or in a disembodied virtual-reality with eternal life in cyber space.

Before the advance of technology, nature could be controlled only vicariously, through appeal to nature spirits, or to the gods that evolved out of them. The transhumanist ideal is rather to become as gods ourselves, even as disembodied intelligence. I believe that dream is as fatuous as the religious one; for, it is not possible to entirely remove from nature or embodiment.[21] My point here, however, is that the ultimate goal of such projects is to be free from *contingency*—from the dependence on externals that creates uncertainty in the first place. However worthy, any new form of *physical* existence would still be contingent and vulnerable. Any new form of sentience, if self-aware, could still experience anxiety over its fate when that fate depends on anything outside itself.[22]

Religion overcomes anxiety with a narrative. Only *stories* offer certainty, since one can know the narrative perfectly. It is the fact that the Bible is accepted as an authoritative *text* that makes biblical prophecy seem possible. (The illusion is that one can flip through time as

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[21] On the other hand, it may well be possible to create new forms of intelligence, with new forms of embodiment, which could supplant human beings as the dominant form—a new source of anxiety for the mortal humans left behind!

[22] A disembodied consciousness living in a virtual cyberspace, for example, could worry that the computer supporting its existence might fail or be disconnected. Virtual "life" would be no more secure than the computer substrate for it. We know already how vulnerable such systems are to cyber-attack, power outages, viruses, etc.

one can through the pages of the text.) However corrupted physical copies may become, a text is in principle timeless. The certainty it offers is like that offered by mathematics: the outcome of a given calculation is always the same. This sort of reliability can also make the speculations of science seem falsely secure as stories about the natural world. The only certainty in the real world, however, is that there is no absolute certainty.

Following Kierkegaard, I have emphasized that anxiety is a natural response to the burden of choice, which can only be lifted by forfeiting choice itself. Hence, the flight into determinism of some sort, where decisions are made for us. That could be the religious version, in which all that happens is God's will. It could be the scientific version, in which impersonal forces cause everything to happen. It could be the medical version, in which the fate of your body is sealed by genetics, statistics, and textbook prognosis. It could be the political version, in which everything is specified in the bureaucrat's book or dictated by a tyrant.[23]

Another option remains: to face anxiety directly, to stare it down.[24] That is the existential approach, which preserves the self's freedom of choice, dignity, and responsibility. Though it does not promise to relieve anxiety, consciously confronting the experience of anxiety at least

[23] See Eric Fromm's book, *Escape From Freedom*, 1942.
[24] See also Irvin D. Yalom's book, *Staring at the Sun: overcoming the terror of death*, 2008.

affirms one's sense of agency.[25] Yet, there is also another side of the coin, which turns the tables on anxiety with some positive compensations. That will be the subject of Part Three. But first, let us inquire about this self, with its alleged freedom of choice. *Who* chooses and who experiences anxiety? How is it possible to experience *anything at all*? What *is* consciousness and what is selfhood?

[25] One could joke, following Descartes (or perhaps Woody Allen): "I feel anxious, therefore I am!"

PART TWO:
SUBJECT MEETS OBJECT

"The eternal mystery of the world is its comprehensibility" —Kant

CHAPTER SEVEN:
Consciousness—Problem or Marvel?

From the time that people began thinking about their thinking, the nature of consciousness has perplexed them. This is why philosophers in recent times have referred to it as the *hard problem* of consciousness—to distinguish it from "easier" problems such as understanding how the brain controls behavior. Brain scanning and other medical technologies have greatly advanced understanding of the nervous system as a control device. But the question of how the brain, or any material thing, can *have experience* is altogether another sort of question. Before considering what sort of approach it requires, let us understand how and why the nature of consciousness is so different from other scientific questions.

Because mental terms are notoriously ambiguous, let me first clarify that 'consciousness' here refers to any and all actual experience, which is always the experience of someone at some time and place. This could be the sensory experience one normally has while awake. But it could also be the experience during dreams or daydreaming, while hallucinating, imagining, remembering, thinking, etc. To use a single umbrella term, let us call this real-time experience *phenomenality*.[26] By definition, this is a "first-person" occurrence in the present-tense. Even if it is a

[26] Philosophers often refer to it with phrases such as 'phenomenal experience', 'phenomenal consciousness', or 'stream of consciousness', meaning the actual contents of consciousness moment by moment, whatever the source.

memory, an abstract thought, or a fantasy of the future, it *occurs* in the present to a particular individual, from their singular point of view.

On the other hand, one can also speak in a more detached manner, in the "third person." One then speaks of events as though they did not occur in the consciousness of a particular subject, but as events in the world or as timeless abstractions or facts. This "objective" way of perceiving and speaking enables people to communicate with each other about their experience, as though it were happening in a common external world and happening to no one in particular or from a god's-eye point of view. It enables us to speak and think of events in the *world* as opposed to events within our own *consciousness*. Communication is our way around the brute fact that a brain is hooked up uniquely to its particular body and senses, and to no one else's, so that we have direct access only to our own phenomenality and point of view. I will later describe this restriction in a more positive way: phenomenality is one's private treasure house, which cannot be taken away short of destroying the person. Yet, it is also a private bubble, in which we are cut off from the experience of others. This separation poses many problems for individuals and society alike.

Consciousness cannot be explained scientifically because, right from the start, science has excluded the first-person from its approach. It is only interested in describing the world from a third-person point of view, which others can

share and corroborate. This reflects and extends our ordinary "realist" way of perceiving the world, as visually "out there" at a literal distance from the perceiver. Furthermore, the ideal of scientific description is quantitative. That means an account of events in some "configuration space," if not the space and time of physics. Though abstract, this too is third-person description.

Even for the study of consciousness, it is not the scientist's first-person experience that counts scientifically, but only facts (assertions) that can be affirmed by others. These might include statements made by the human test subject, as in a psychology experiment. But it is the public fact of recording the statement that counts as data, rather than its content as personal experience. In principle, facts that are supposed to be objective must be accessible to all observers—or at least to select, interchangeable observers. That means from a third-person point of view. The idiosyncratic personal experience of the scientist, just as of the test subject, is irrelevant because it is not accessible to others.

So, if a strictly scientific explanation of phenomenality is not possible, because of the specific approach of science, then what kind of explanation should one look for? The challenge posed by consciousness is to explain the subjective in objective terms. That means to explain the very existence of the first-person from a third-person point of view. However, the presumed objectivity of the "third person" is not a god's-eye view but a social convention of

language and thought. It is a way to transmit information from one agent to another, inter-subjectively.

An explanation of consciousness must include an account of agents and their purposes, not simply facts about the passive interactions of molecules or other physical events. All phenomenality is by definition first-personal, the experience of a subject. One may claim some observation as a fact about the world, but that is *one's own* claim, on the basis of one's own experience. We are used to thinking of facts as free-standing truths that exist independently of anyone asserting them as claims. But this is no more than another convention, literally a manner of speaking. "Facts" are assertions, whether true or false, made by agents on the basis of their experience. They are communications from one agent to another. Scientific facts and theories are claims that scientists make to one another and perhaps to a wider public. By trading in *statements* (facts) rather than *experiences* (phenomenality), scientists side-step the problem of explaining or even acknowledging the consciousness that underlies their claims. By ignoring the relevance of the subject, and of their own purposes as agents, they can focus strictly on denatured matter to be manipulated for purposes that need never be mentioned.[27]

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[27] Individual scientists may reflect privately, and comment informally to each other and in the popular press, on scientific methods, goals, and metaphysical assumptions as well as on their personal experiences. Such discussion in academic papers, however, generally lies in the domain of philosophy, not within science itself.

The modern understanding of cause involves one inert thing impinged on by another, and perhaps transmitting that influence to another thing, but initiating no action on its own. The fact that organisms do not fit gracefully into this "domino" worldview has motivated a huge effort in biology to explain the phenomena of life in terms of non-living matter—ultimately in terms of physics and chemistry. This project has been remarkably successful, but at a cost: it consigns the notion of agency as something to be explained rather than a principle that can be used to explain other phenomena, such as consciousness.

If consciousness cannot yet be scientifically explained, because of the self-imposed limits of science, I propose that it can nevertheless be understood to reflect the actions and purposes of agents. In other words, being conscious is something that some organisms *do* for good reason. Consciousness does not passively register per-existing facts; rather it generates them. Phenomenality is not a superfluous addition to the organism's behavior; rather, it is integrally involved in at least some forms of cognitive behavior. As philosophers say: it is functional, not epiphenomenal. So, what function does it serve? To begin to understand that, let us consider the experience of pain and the behavior associated with it.

Let's say you accidentally touch a very hot surface. Your hand may jerk away in reflex even *before* you feel any pain. But if that doesn't happen quickly enough to avoid tissue damage, you will soon experience a burning sensation, which may linger for some time. That sensation strongly encourages you to protect the damaged tissue.

Thus, the response to the hot surface has two components: an initial unconscious reflex and a subsequent conscious sensation of pain. They have different associated behaviors, different pathways in the brain, and serve different purposes. The reflex quickly removes contact with the stimulus. The lingering painful feeling, however, is a secondary response. Significantly, it is not simply *caused* by the external stimulus but is *internally generated* by the brain. It may persist for the duration of the healing process, thus serving to avoid *further* damage during healing. That goal cannot be achieved through local reflexes alone, but must involve the coordinated effort of the entire organism. Protective behavior is associated with the painful sensation and depends upon it. This is not a question of experiencing the pain and *then* deciding to behave a certain protective way because of it. Rather, the pain and the behavior are integral. The pain is a compelling reminder to behave a certain way. An organism that could not feel pain would scarcely be able to protect itself from incidental damage to an injured part.[28]

I am using pain as a paradigm example of conscious experience that obviously involves feeling along with particular behavior. However, much phenomenality does not involve feeling in the same way, or any associated

[28] As can happen to people who have lost sensation in some part of the body. Insects generally do not respond to the loss of a limb or other serious damage with protective behavior, suggesting that they do not feel pain—a deficiency for the species compensated by expendable numbers of individuals.

behavior. Visual experience in particular seems highly disinterested.[29] But vision and hearing are *distance* senses, so that direct contact of the stimulus with the organism is not involved. Neither, therefore are the responses implicated in direct contact. Because of distance from the stimulus, the organism has time to monitor the environment at a level that requires more processing time in the brain; it can consider higher-order responses whose significance is not associated with the impact of the stimulus itself. The photons entering the eye may be harmless in themselves. Nevertheless, detecting the shape of a tiger in the bush may elicit fear and a flight or freeze response; the color and shape of a piece of fruit may prime a hungry creature for action. We are predominantly visual beings, who enjoy a partial ability to stabilize their environment—not only in perception but actually as well, through technology. This can give us the misleading impression of being disinterested observers of the world. Yet, feeling remains at the core of all perception, including vision with its relative detachment.

So, what *is* feeling? Judgment is involved insofar as a feeling is either pleasant or unpleasant. Judgment is how we evaluate the stimulus, as good or bad for us. We are attracted to what is pleasant (good) and we shun what is unpleasant (bad). In other words, the *meaning* to the organism of some sensations lies in the behavior (preference or rejection) associated with them. In such cases, the

[29] Indeed, our notions of objectivity derive mainly from the visual sense.

connection between the input of the stimulus and the output of the behavior is not a simple causal connection as in the reflex. It is mediated by how the organism evaluates the significance of the stimulus for it, which often involves convoluted pathways in the brain, reflecting complex considerations. The distance senses allow time for even further consideration. Causal analysis of these pathways by itself sheds little light. We must also understand the intentions of the organism as an agent.

It is one thing to consider what purpose phenomenality serves as a biological function, but we still have not answered the more elusive question of what phenomenality *is*. The physical world includes such things as trees, rocks, clouds, human bodies, animals, chairs, automobiles, molecules, stars, electrical and gravitational forces, etc. While this list will include, for example, teeth and rose blossoms, there does not seem to be a place on it for such things as the *ache* of a toothache or the nasal *sensation* of the rose's scent.[30] If these *phenomenal* things are not material, how shall we think of them?

I propose to think of them as communication of the organism within itself, messages through which it represents to itself its own changing state and that of the world.

[30] Or, for that matter, the rose's *color*. Because of the apparent objectivity of the visual sense, it is more difficult to think of color as a *sensation,* occurring on a sensory surface. Yet, color perception is transmitted from the surface of the retina and clearly depends as much on the subject as on the object.

Phenomenality is a sort of internal narration that is constantly updated on the basis of new sensory input. Perhaps the best (and most current) metaphor is to say that it is a virtual reality guided by real reality. That is, it is *like* the sort of simulation or animation produced by a computer program, which employs a special computer language. The difference is that the brain writes its own program, in its own language in real time for its own use, while interacting with the world.

A literal animation is an entertainment. However, simulations are used for serious purposes as well, to model the real world and make predictions. Sensory awareness keeps us apprised of happenings in the world that can affect us. Phenomenality includes immediate sensory experience; but it can also project beyond the present, as when we have experiences of imagining and remembering, which nevertheless take place in the present moment. We could say that the brain creates for itself a useful model of the world, something like news reporting, which can also anticipate the future. On the one hand, this is a creative production, selectively composed by the newscaster; on the other, it is continually guided and updated by real-time input garnered from the world.

I mentioned before that the experience of pain is internally generated, although triggered by an external stimulus. The general truth I wish to underline is that *all* experience, all thought, and all behavior is similarly generated internally, while in response to external reality. Both an internal and an external input are always involved together in all that we experience, think or do, in an ever-

shifting balance. Consciousness has both a subjective and an objective aspect, entangled as two "variables."[31] The great human conundrum has always been to sort out what derives from the object and what from the subject.

But why create this internal "show" at all? The answer lies in the fact that the senses are not open windows on the world, but more like instruments (such as thermometer, motion detector, or smoke alarm) that are remotely monitored and interpreted. The brain, after all, is perfectly sealed in its windowless and door-less chamber! It cannot peek outside to check what is really going on in the external world, but must create its own version of that: the internal model, the virtual reality we call experience.

This brings us back to the role of consciousness as a separate control system, to deal with situations that cannot be handled automatically with pre-existing programs. It is *as though* someone must monitor events depicted in the model and take charge when autopilot is inadequate. However, I certainly do not mean that there is a little person inside the head, employed to watch the virtual reality! Quite the contrary, *the entire brain must act as though it were a person* and not a makeshift apparatus limited to specific routines. It must act as though it were directly perceiving the external world, while it is only—so to speak—reading a map. Toward that end, what is

[31] I call this the "Equation of Experience". One recalls from high school algebra that an equation with two variables cannot be solved without a second equation in the same variables. Unfortunately, in life there is no second equation!

happening inside the brain is projected as real events in external space. Indeed, the brain performs this sleight of hand in a seamlessly integrated way that normally goes unnoticed—just as successful magic tricks should! Much of what we have been able to discover about the operation of consciousness comes from investigating circumstances in which this integration breaks down in some way, betraying the great Oz's manipulations and special effects behind the scenes. Consciousness *is* that integrated state of "being there." Phenomenality *is* the virtual reality the brain produces—for its own use, as a guide to the "underwater" world when the "submarine" requires manual control. It is a real-time dynamic map of the off-limits world outside the skull.

It is important to grasp that this map is *purely symbolic*. An ordinary road map is also symbolic, but the symbols (such as the lines representing different kinds of roads) are based on the properties of real roads and other features of the real landscape. People have seen such features with their own eyes, of course, and can easily re-imagine them from looking at the map. The submarine navigator's map, however, is entirely abstract; no one has ever directly seen the territory it represents, or anything outside the submarine itself. On the contrary, seeing *is* the process of inference about the outside, which is going on inside in the course of navigating according to the internal map. The symbols of this map bear no *resemblance* to what they represent, yet come to *stand in* for it in such a way as to be experienced as a real world. The dynamic map is not like photography but like computer animation or an "artist's

conception" of something that cannot be literally photographed (or, in this case, even imagined).

Phenomenality is thus a continually updated internal simulation of what goes on outside the brain. We must add the caveat, however, that the very notion of "outside" is just another part of the simulation! Like representation in general, literal simulation implies something already known that it is a simulation *of*. However, this internal virtual production is not a *copy* of something that can be accessed some other way. Rather, it is an original creative act, albeit guided by interacting with whatever is "out there." The picture your brain conjures on the basis of its instrument readings is *reality* for you, and that conjuring act *is* your phenomenality.

But what is the nature of this conjuring? How is it done? To give it a time-honored name, let us call it *fiat*, which is a Latin word that means *decree.* Fiat is declaring something into existence—as in a royal decree or the divine decree, "Let there be light!" It is like the author's poetic license to create. Or, like the mathematician's license to posit by hypothesis: "Let x stand for such and such." In our virtual-reality metaphor, it is the programmer's creative act of writing code. An agent produces a result simply by asserting it. If we were speaking of external objects, this would be magic: conjuring something from nothing with the wave of a wand, in total defiance of causality and physical law! But we are speaking rather of internal virtual objects, which are not material but imaginative creations of the brain. It is a private magic show, for your eyes only.

Unlike the natural thing, the conjured thing is what the magician says it is, no more nor less. Narratives of any sort are of this kind. So are concepts (including scientific theories) and artifacts generally (including technology). As opposed to natural things, artificial things are just what they are defined to be. Thus, they are finite and definite in structure; in contrast, one only guesses at the structure and parts of natural things, which one did not make. A simulation is an artificial thing, in contrast to the natural reality it simulates. Phenomenality (the brain's virtual reality) is an artificial thing, a product of the brain's definitions, its narration to itself. Thus, phenomenality has the crisp and unambiguous quality of all products of definition. This makes sense, because the organism must take decisive action in order to survive, even in the face of limited or ambiguous information. Even when mistaken, we generally do not perceive the world as vague or ambiguous, but definitely a certain way. Hence, those classic ambivalent figures in Gestalt psychology that can be seen in two distinct ways. One does not see them as vaguely in between; instead, perception flips alternatively from one definite interpretation to the other.

Uncertainty is the basic problem confronting the creature with limited information about the external world, on which survival depends. It must make life-and-death decisions based on its imperfect map, its rough and tumble "theory" of reality. Perception extracts and interprets a meaningful signal from a background of irrelevant noise.

For, we can (and must) make decisions based on our perceptions, ideas, and available information, however well they correspond to reality. Though our perceptions may be definite and our beliefs may be adamant, the self-conscious creature also knows that confidence can be misplaced. It knows that perception and thought do not necessarily correspond to reality, and that all answers are provisional.

Scientific theories also attempt to provide definite answers based on limited information. Experiment too is a process of sorting signal from noise, eliminating background influences to isolate identifiable events, patterns, or causes. Experimental findings are often far from decisive and may lead to further, or more careful experiments. Decision about a result (such as whether a new particle or effect exists) may be a matter of consensus.

By definition, information reduces uncertainty. The modern concept of information is a measure of how many binary decisions (bits) are required to specify something unambiguously. This is like the game of Twenty Questions, or Charades, where the questions posed must be answered yes or no. In either of those games, there is a predetermined correct answer that someone knows in advance. Artificial things—such as machines, scientific theories, and equations—can be characterized by a finite amount of information. Questions about them can come to an end eventually. But there are no predetermined answers concerning nature, unless we imagine they exist in the mind of God. There is no limit to the questions that can be posed.

Perceiving is not passively detecting a reality "out there." Rather, it is an active intervention that has to do with the needs of the organism as much as with the structure of external reality. Phenomenality is neither a pure fiction nor a revelation of the world as it "really" is. Rather, it is a guided hallucination, a collaboration of inside and outside. Oddly—and quite circularly—the outside can only be known as part of this co-production. The unique weirdness of this circumstance has no parallel. There is nothing to compare it to that escapes the dilemma, which results from being both the producer and the consumer of the experience we try to understand. This is why consciousness has boggled philosophers for centuries!

The conscious self is the agent that makes use of this guided hallucination we call experience. Its role could be likened to that of a CEO in a corporation, who has limited executive powers and is ultimately responsible to the shareholders—the body's cells and genes. Its job is to monitor and coordinate the activities of diverse (non-conscious) subsystems. Phenomenality is the display through which the CEO keeps track of changing conditions, both external and internal.[32] It is the graphic version of an internal language—just as the display on a computer monitor is

[32] I do not mean to suggest that the human organism alone possesses phenomenality, nor to suggest that other creatures necessarily do. We are not in a good position to imagine the phenomenality of other organisms, and the question of where to draw a line, case by case, is thorny indeed. If human beings are isolated from each other's experience, we are all the more isolated from the experience of other creatures.

the graphic version of computer code. In the case of the desktop or laptop computer, the display is not for the benefit of the computer but for its user or programmer. The organism, however, is *programmer, computer, and user all in one*.

So, why can't *non*-conscious brain processes play this monitoring role? Well, to some extent they do—especially in familiar situations or those that can be handled automatically. That's why we can daydream while driving or zone out while washing dishes or performing other "mechanical" tasks. Some people walk (and even drive) in their sleep. The body self-regulates mostly without the aid of consciousness. But some situations demand conscious attention—explicit representation—which mobilizes resources beyond dedicated programs. Hence, one must pay attention while learning to play a musical instrument or learning to drive. After a while it becomes automatic; one knows it "by heart"—which is to say, without the former effort of conscious attention. Because the world is full of novelty, however, the CEO is never out of a job.

CHAPTER EIGHT: Selfhood and the Subjective Frame

If the function of consciousness is to monitor the organism and its world, then *self*-consciousness serves to monitor the monitoring. One can drive a car semi-consciously, keeping it in its lane on the straightaway at a safe distance from other vehicles with a minimum of attention. One needs full attention, however, to navigate through an unfamiliar neighborhood, and to deal with surprises or emergencies. Self-consciousness keeps us awake at the wheel, so to speak, by monitoring how well consciousness is doing its job.

Self-consciousness is awareness of being aware. It enables us to question our perceptions. This affords the opportunity to compensate for the built-in overconfidence of perception, which tends to be definite even when the reality is ambiguous, and adamant even when wrong. Thus, we are able to question any aspect of our cognition and behavior. Since that involves internal conflict and poses choice on a higher level, ironically it can be a source of anxiety and doubt. The antithesis of implicit belief in one's perceptions is paralyzing distrust of them. (Either extreme does not respect the normal balance of inputs from self and world in the co-production of experience.) Despite this liability, self-consciousness is crucial for a highly intelligent creature that is also highly social. It enables self-transcendence, altruism, the use of reason to override instinct, thinking outside the box. Through self-awareness, we can evaluate our abilities, values, goals, and actions and adjust them as needed. We can hold our impulses in

check—or realize that they are being held in check. It is a higher control mechanism with great social utility, which enables us to consider the point of view of others and liberates us from rigid thought and behavior.

Self-consciousness puts a *subjective frame* around experience, so that we regard experience as phenomenality rather than as the external world or as objective truth.[33] This "frame" is any perceptual cue that reminds us to view our experience as the result of our own mental processes and not simply a transparent window on the world. It reminds us we are the co-producers of this show. As we shall see in Part Three, this also has the advantage of enabling us to step back from a focus on the particular contents of perception, with their urgent-seeming implications, to appreciate phenomenality in its own right and for its own sake. To sit back and *enjoy* the show.

To think outside the box, however, one must first be aware of it. The subjective frame is its discernable outline. The "box" is the framework within which one is thinks and perceives, and from which one acts. Metaphorically, it's *home.* But a shelter, while necessary and comfortable, can be a prison if one is not aware that there is an outdoors beyond. The limits of perception and thought are the limits of our "world."

A frame surrounds a picture, setting apart the area within as a realm distinct from the room in which the

[33] The philosopher Husserl called this change of frame *bracketing*.

picture hangs. To use another metaphor, instead of looking *through* a lens, one looks *at* it. Instead of being immersed *in* the play of a game and taking it seriously, one sees it *as* a game, as though from outside or above. These are metaphors, but a *literal* example of the subjective frame is the sensory experience when you become suddenly aware of the outline of your visual field. Closing one eye, this becomes as plain as the nose on your face! Other examples of such cues are the tingling sensation in one's limbs, one's heartbeat, a ringing in the ears, or other body sensations that normally remain tuned out while attention is focused outward in the world. They remind us that our experience of the world is actually produced in a humming biological factory.

Because we rely so much upon it, the visual sense usually seems to present *the world* rather than a phenomenal *display*. This is natural, since we are creatures for whom the external world is our natural focus of interest. Yet, it serves us to know this fact, and to be able to shift this focus voluntarily. Paradoxically, awareness of our cognitive processes and subjective limits helps us to attain greater objectivity, a more adequate model of the world. The subjective frame calls our perceptions, habits, biases, values and goals into question, allowing space for re-evaluation and time to look before leaping.

In the subjective frame, real three-dimensional space *out there* becomes a perceptual space *right here*: your visual field. (This is what a painter does when "flattening" visual space.) The mind's normal job of interpreting and acting upon sensory signals is temporarily suspended in

favor of simply noticing them. Thus, one's attention may be drawn to sensations that belong clearly to the body—in the muscles, on the skin, smells and tastes, etc. These become part of a total *phenomenal field*, which includes the distance senses when they are considered to present bodily sensations rather than events in the world. This total field of awareness also encompasses all that one can be aware of, including memories, thoughts, and images that occur in the mind's eye. The subjective frame reconsiders the particulars of this field as functions of *this* body and *this* mind rather than as features of external reality. One then *owns* one's experience, realizing that the perceptual search for the objective characteristics of the world is a project ultimately motivated by needs of the body.[34]

While the world, which is one's normal focus, will presumably continue on, *this* phenomenal field and *these* thoughts will come to an end with this body. For the time that it endures, however, quite apart from outer accomplishments one's consciousness stands as one's life work. Like most works of art, this opus is fragile and ephemeral, because the body and brain that support it can be damaged and will ultimately perish. One can lose memories and other mental faculties. Yet, even if one has nothing else in

[34] Similarly, the *scientific* search for the objective characteristics of the world is seen as relative to the needs of society and the species.

the world, at least one has one's own phenomenality for as long as consciousness lasts.[35]

The other side of that coin is that one is stuck with what cannot be lost. The subjective frame imposes a boundary between self and other. Phenomenality is a private bubble within which we are trapped. We cannot, after all, literally experience another's experience. To be sure, the reason for this is simple and physical: this brain is connected to this body. To be an embodied organism is to be literally separated in space from all other bodies, and thus separated in point of view. To compensate, as social creatures, we have developed empathy, at least for others of one's kind. (Empathy remains one's *own* experience, which *imagines* the experience of the other.) We have also developed the ideal of objectivity (which imagines one's own experience as a common window on the world).

The subjective frame frees one from a given interpretation of experience, by focusing on the sensory evidence for that interpretation. Thus, ironically, it can free one even from morality, values and conscience, and from the empathy felt for another person or creature. The ability to transcend or detach is thus a two-edged sword. It can liberate us sometimes when it should not. Subjectivity gives us a perplexing double vision: of the world as real and as virtual, as necessary and as arbitrary. Overall, however, it serves us well. Without the subjective frame, we would be prisoners that did not know they were

[35] Perhaps that is the consolation Descartes was seeking, who concluded that so long as he had any experience at all, he must exist (*cogito ergo sum*).

imprisoned. What we choose to do with freedom is another matter.

When phenomenality is considered in its own right, for its own sake, the usual cognitive function of tracking reality is suspended. The contents of consciousness then make no demands, bear no implications, require no action. They just are. Anxiety arises from uncertainty about what is happening and what to do about it. Suspending the frame of "reality" allows one to take a break from anxiety and simply float in experience. In the course of a life busy preserving itself, this lapse can only be temporary. But toward the end of a life, the lapse can be prolonged and take on a new significance. It becomes part of taking leave from the struggles of living—part of "retirement" from the obligations of survival, striving and doing. It is a compensation that remains when the world begins to recede from the foreground.

The world itself will continue to be full of urgencies, as important or unimportant as ever. It will carry on after one is gone, and others can trouble themselves about it or not, as they choose. Of course, old age does not *oblige* one to ignore the world, any more than youth obliges one to be caught up in it. On the contrary, the point is that one has a degree of freedom at *all* times concerning where to put attention. For myself at least, in retirement I have the time and resources to be more concerned than ever about the state of the world. At the same time, "in here" becomes more attractive as I grow weary of the world "out there"

and its demands, and weary of the life of this body and its demands.

We shall see in Part Three that the subjective frame is the basis of a state of *appreciation*. It can be harder to appreciate life when too immersed in it, just as the fish cannot perceive the water it moves in. Some distance is needed in order not to be totally caught up in plans, projects, emergencies and struggles—endless doing and details. When one is enthralled in the game, it is not even perceived as a game. One must wake up from that trance in order to appreciate the game for what it is—perhaps an interesting and beautiful structure in its own right, potentially fun to play at. Appreciation comes with that shift of perspective. To question the game is not to reject it or refuse to play. It is just to claim freedom in how to relate to it.

The subjective frame also serves creativity. Reality is challenging and we are natural-born problem solvers. However, a well-defined problem is itself a limiting structure, a box. Problem *solving* is one sort of skill; but usually the problems are invented by others or imposed by circumstance. For example, intelligence tests involve predefined problems presented by the creators of the test, who are testing for abilities *they* value, which may not be what the subject values. Usually, there are pre-existing right answers. Much of life, however does not consist of such well-defined situations, of hand-me-down problems with a single ready-made answer. In many real situations, the challenge is to formulate the problem in the first place—in a clear way to which existing knowledge can be applied.

This is a distinct, complementary, and more intuitive skill in its own right. It is the ability to find, define, recognize, or create the challenge yourself, according to your own goals, or just for the fun of it. The subjective frame allows one to go beyond recognized problems, as they are currently defined, to see a bigger or different picture with better or more interesting solutions.

The scientific worldview has no place for consciousness, purpose, or agents—only for mindless cause and effect. The religious worldview simply *presumes* consciousness; it offers no explanation for the relationship between mind and matter. I have attempted to present a different picture, in which the concept of agency plays an essential role in our behavior as organisms and also in that elusive but most obvious feature of our lives as human organisms: consciousness. In this picture, the self actively produces experience, sharing creative responsibility with the external world. Yet, in this same picture, the self is little more than a fictional character in the virtual reality the mind presents to itself. Defined this way, the self is an agent of the body, with legal and moral responsibilities, but no existence apart from the corporation it serves.[36]

This view of the self is very different from both the traditional spiritual concept of the soul and the scientific concept of matter. In the present view, the self with its consciousness disappears when the body ceases to function

[36] A literal CEO, of course, has a life apart from the corporation, can retire with a handsome pension, and continues to live if the corporation is dissolved. All metaphors are limited.

as an organism. This termination of consciousness is no more (or less) tragic than the termination of the body it serves. The self is not an entity separate from the body, but shares its fate. What does this view of the self imply for the individual facing mortality?

First: the self is no *thing*, but a bodily *function*, like digestion or breathing. You *are* that function! There is no soul in a metaphysical sense.[37] There is no basis for believing in life after death. But, equally, there is no reason to fear either personal disappearance or punishment after death.

Secondly, being a self grants no special *entitlement* to live forever or apart from the body. The self is a virtual representative of the body, its "avatar." For its own reasons, society might value some bodies or some minds more than others. In nature's scheme, however, a body is temporary and so is the consciousness that one calls oneself. It makes biological sense to be attached to the survival and well-being of one's physical body for its duration. In the view presented here, however, it makes no sense to be attached to one's consciousness as though it were separate from the life of the body or could continue after. The avatar has no meaning apart from the body it represents. Fear of death has a biological basis to protect the body. But the quest for immortality is based on a misunderstanding of personal identity.

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[37] Aristotle's idea of 'soul' is no more than the essence of the creature or person, a quality not a thing. It was rather Plato's idea of an immortal soul that Christianity embraced.

Some spiritual and philosophical traditions teach that the dualism of subject and object is illusory. Such teachings often involve a concept of reality as fundamentally spiritual or mental. In contrast, the scientific teaching is that reality is fundamentally material. For me, both precepts violate the basic principle that all experience and thought is a *joint product* of self and world, a *co*-production of subject and object. The metaphysical claim that mind (or spirit) alone is real, and the material world is illusory, parallels the opposing claim that matter alone is real and mind is illusory. Yet, both are claims about "reality," which disregard the involvement of the self as the agent who makes them. I have emphasized that awareness of the subject's essential participation renders experience unavoidably ambiguous, and that this ambiguity is a fundamental source of anxiety. In that case, both science and religion may be motivated to overcome anxiety simply by substituting their own definite ideas for natural ambiguity.

The Golden Rule and the spiritual program to transcend "ego" have practical social roots. With the expansion of civilization and trade, with increasing intermingling, the definition of *human* had to become more inclusive for people to coexist. The ethical teachings of religions served that purpose: "thy neighbor" became ultimately any member of the biological species, to treat as you would be treated. What is essentially an ethical ideal (how best to relate to others for the sake of society), dovetails with a metaphysical ideal of self-transcendence that serves the individual's spiritual growth and personal salvation.

From the point of view presented here, self-transcendence is a mental capability of a conscious agent, which has both personal and social benefits. Through imposing the subjective frame, a given state of mind may be transcended in favor of a larger perspective. However, this action is only relative and provisional; the new perspective is also potentially confining and must in turn be transcended—ad infinitum. This internal leapfrog has nothing to do with being finally rid of the self, the personality, the mind, ego, or selfishness. It is simply a matter of shifting from one limiting framework to a more inclusive one. Unfortunately, the potential for self-transcendence gets confused with a notion of abandoning selfhood altogether, as though that were possible and desirable.

While losing the ego or quieting the mind may be spiritual ideals in some circles, others advocate an ideal of mindful self-possession. While some traditions emphasize "be here now" (wherever *here* is), others emphasize "know thyself" (whatever that self is). How can some preach to empty the mind of its chatter and get rid of its baggage while others teach to hone its powers with discipline? Such confusions are not helped by inconsistent language. The 'ego' in Freudian psychology, for example, is not the same concept of self as expounded in Vedanta; nor as employed in such vernacular expressions as having a "big" ego or a "weak" ego. In the end, however, the inconsistency is superficial. For, self-examination and self-discipline are required alike for moral behavior, for a quiet mind, and for an understanding of selfhood that puts one in a position of

humility without denying responsibilities. There can be no humbler position for the self than to be merely virtual, a servant of the body! If the deepest fear is to cease existing, the deepest realization is that no substantial self exists in the first place!

To understand the ongoing struggle of secularism and religion, which is as much a feature of the world today as it was in the Renaissance, let us look again at the concept of agency. An agent *acts*, while inanimate matter simply reacts. While some natural forces, such as the wind, give an appearance of agency, the scientific program has been to demonstrate that *all* natural phenomena (at least in the case of non-living things) merely react to applied forces, which in turn react to other causes. They are not agents in the sense that the human beings studying these phenomena apparently are. Hence, an implicit dualism between agent and reagent is built into our modern view of the world.

People were fighting a rear-guard battle to preserve human agency (and, thus, free will) even before the inception of science, with its doctrine of determinism. Part of the attraction of spiritual ideas is that they seem to uphold human dignity against the encroachment of mechanistic explanation, which would reduce human existence to the behavior of molecules.[38] The scientific presumption now is that our nature and behavior can be reduced to even more elementary physical components—ultimately to quantum

[38] Even the rationalist Socrates had ridiculed the arguments of some of his compatriots, that human behavior could be accounted for by the motions of atoms.

events. Religion holds that, as spiritual or moral agents, we live also in a moral realm, with different laws from the laws of nature. Of course, we are also legally responsible agents in the realm of society and its man-made laws. Science has not yet entirely exempted citizens from moral and legal responsibility. Yet, as science encroaches on jurisprudence, as well as on religion, the tendency is to deliver us from responsibility for our actions by reducing us to the interplay of chemicals in a test tube called the body, over which "we" have little control.

In contrast, the obligations of a spiritual agent are dictated by the person's belief system, especially by doctrines set down or implied in sacred scriptures, which describe the world in unambiguous terms and prescribe how to behave within it. Believers tend to know where they stand in such a world. While capable of disobedience, they know its consequences. Another way to put this is that believers have entered a child-parent relationship with a spiritual authority. To ensure that relationship, the fact must be denied that the guiding scriptures were written and interpreted by fallible men (not even women!); furthermore, responsibility for having embraced such a belief system in the first place must be ignored.

The Christian religion throws into this pot the dubious notion of "salvation," which involves approval by an all-powerful deity. No doubt the concept of salvation reflects an understandable need for acceptance. As with children, submission is enforced by rewards and by threats of rejection: promises of eternal bliss or eternal punishment in the spiritual reality after death. In polytheistic religions,

in contrast, no god is all-powerful. The gods and spirits can be played off against each other; if appeal to one doesn't work, you can always try another. Catholicism has preserved some of this pragmatic arrangement with its diversity of patron saints and cults. So also have Hinduism and Buddhism. As superstitious as that might seem, at least it preserves the independent dignity of the clever and manipulative child. Fundamentalist Christianity, in contrast, regresses adherents to the abject position of the child seeking parental acceptance.

While the scientific vision reduces one to a meaningless lump of matter, the religious vision reduces one to a credulous simpleton! Apart from such extremes, how does one reinstate oneself as an accountable agent with a modicum of dignity? If philosophy is training for death, certainly it should be training for life as well. It should tell us how to be responsive, and find meaning, while acting on our own authority and initiative. That means to be neither submissive nor reactive, but conscientious in the measure we are conscious. It means to claim responsibility for our perceptions and beliefs as well as for our actions, pawning nothing off onto an alleged reality, whether material or spiritual. It means to be awake and not simply running on automatic, nor running someone else's program, whether that of nature, of God, or of our political leaders. This requires perpetual self-examination, doubt, and inevitably some anxiety.

PART THREE:
THE BEAUTY OF IT ALL

"Life is real only then, when 'I am'."
—Gurdjieff

CHAPTER NINE: The Other Side of the Coin

In Part One, I brought you the bad news: just as there is no avoiding pain and death, there is no avoiding some anxiety. For, life is simply uncertain. In Part Two, I explained the nature and function of consciousness, how self-awareness produces greater response-ability, and the tenuous status of the self. In this third part of the book, I offer some good news: just as love is an antidote for fear, so a receptive attitude of appreciation is an antidote for anxiety. This is not a strategy of avoidance, however. Quite the contrary, what I call *appreciation* is a reward that follows from an undaunted confrontation with holy terror and one's personal demons. I do not claim that one cannot appreciate life without this confrontation. But, at the very least, one's appreciation will be deeper because of it. An attitude of appreciation will not make you immortal, but it might lengthen your life. It will not free you from suffering but it might change how you experience it.

Many spiritual traditions encourage gratitude as the appropriate attitude in life. Because such traditions tend to be theistic, I prefer to speak instead of appreciation. Gratitude is commonly felt *toward* someone, for their generosity and for what is given or done. It is a reciprocal transaction, tit for tat. The concept of appreciation I propose is more impersonal, unilateral and unconditional. To *appreciate* something is to appraise and value it positively. Yet, this is an entirely voluntarily gesture; it is not compelled by the virtues of the thing appreciated, nor by the generosity of a donor. It does not put the onus on

the thing judged to meet the criteria that make it valued. To appreciate something is no ordinary judgment, in which one thing is compared to another or to some standard. It is not about a gift to you personally, for which you are beholden. It is not a transaction, but a way of looking. It is an inner state that depends minimally on externals and maximally on attitude.

I have characterized a certain aspect of religion, science, and art as cultural defense against holy terror. But, of course, another aspect of all three is the very opposite. For, religion, science, and art serve also as conduits to the Great Mystery, filters through which to safely approach it. These are the two sides of the coin. *The beauty of it all* is the other face of holy terror. The very uncertainty aroused by the unknown is potentially the source of a positive experience of mystery and beauty, the antithesis of anxiety.

Mystery, however, does not mean mystification. It does no good to short-circuit appreciation by *trying* to arrive at a positive experience, inventing a rationale for it. Rather, there is a suspension of judgment, relaxation instead of effort. This does not mean no effort is involved, however. Paradoxically, it may be hard work to relax one's judgments, especially the need for certainty. The difference is that one is not trying to achieve a preconceived state, only to see what happens when one lets go of certain states. Yet, "letting go" is no easy matter. One must first acknowledge the clinging and own the motivations behind it. One doesnot know in advance where that might lead. Thus,

appreciation requires curiosity and patience, and perhaps a little faith that things are at least well enough.

Though religion, science, and art serve as a kind of cultural armor, they do so *in the name of* an earnest quest to explore the mystery of existence. Thus, we should expect that they can also serve as modes of appreciation. The religious version of appreciation, however, is not worship, which has a definite object, but a wonder that is diffuse and objectless. Religion without theology focuses on an *attitude of the subject*, rather than the nature of an object or person, such as God or the soul, or the venerated qualities of exemplary figures such as saints.

If religion is the most direct and frontal assault on mystery, it is no surprise that it also has at its disposal the most heavy-handed weapons of defense against it. This is because, even for the mystic, there is a ceaseless struggle with the need for certainty and the tendency to reify. Science takes a less personal, more detached and formal approach to the mystery of existence. It is all about the properties of objects, and so involves a similar struggle against the need for certainty and the tendency to reify. The dominant role in science of mathematics (whose truths are true by definition) represents the drive toward certainty and thus control. Its advantage is to redefine nature in precise terms. Though certainty is ideal, mathematical theory is never for long allowed to override the voice of nature itself, channeled in experiment. Science restrains itself to be provisional, always ready to doubt when evidence demands it. As in courts of law, what constitutes evidence is carefully prescribed and open to cross-examination. In

principle, science remains as open ended as the natural reality it attempts to fathom. The scientific version of appreciation is not certainty but wonder.

Art is not as left-brained as science, nor as bound to the verbal as religion. On the other hand, the artist can be as experimental and technical as the scientist, and as dogmatic or mystical as the religious believer. Art embodies the paradigm of the artificial as opposed to the natural. If science emphasizes the object, art emphasizes the subject. While religion and science provide their own modes of appreciation, art is perhaps closest in spirit to the notion I propose. One speaks, after all, of 'art appreciation'. The viewer's encounter with the artwork potentially bears the elements that characterize the experience of appreciation. First of all, there is recognition of the subject-object relationship. An artwork is undeniably made by someone.[39] In a museum context, at least, the viewer comes deliberately to the work, and approaches it as an artifact, so there is no denying either the creator's or the viewer's role in the experience. The subjectivity of the artist is obviously involved in the creative process; it invokes the subjectivity of the viewer as well. Secondly, art offers little basis for anxiety because there is generally nothing of consequence for the viewer to decide. One may judge the artwork and like it or dislike it; but an art object is neither true nor false.

[39] Many religious people pretend that holy scriptures channel the literal word of God, ignoring their human authors. Religious icons and idols may be imbued by believers with a similar immanent holiness.

It does not, like a doctrine, ask you to believe it.[40] If indeed it is considered an artwork and not an *idol,* one is free to take it or leave it, to like some aspects and not others, to have one's private opinion. Even if the image is considered sacred, one is aware of its human origin as a proposal by the flesh and blood artist. It is not a holy relic but an act of communication, which may happen to stimulate a conversation within the viewer or with others (as perhaps the artist intended). This is usually more of a polite invitation than a confrontation. A certain vigilant part of the mind may thus relax. No one need fear being pounced upon by a painted tiger!

Such a relaxation may be challenging for the religious mind, which may feel a crucial personal stake in "salvation" and an intense need to be decided about doctrines and spiritual realities that bear personal consequence. Unlike the painting, a doctrine can be true or false, obliging one to take a position in regard to it; believing it or disbelieving it can have serious consequences.[41] Unlike an artwork, an idol or icon cannot be separated from the deity it represents. It may be blasphemy to regard it in the wrong way. It is perhaps easier for the scientist to relax. Most scientists are sanguine about the fact that most theories are

[40] Nevertheless, religious art works have often been defaced or destroyed by iconoclasts or rival sects, just as "heretical" literature has often been burned.

[41] Not only imagined consequences proposed in the doctrine (e.g. heaven or hell), but also real consequences such as being socially lauded as pious or (at the other extreme) burnt at the stake.

unsuccessful and that many experiments do not yield the anticipated results.[42]

Like the scientist, the artist may love the process more than the product. This makes for an altered state of heightened attention, of expectancy without specific expectation. Many artists are tinkerers, experimentalists; many experience doing their work as a sort of meditation or exploration. Other artists are more like theorists, with definite ideas and goals, in which they may be highly invested. Like anyone, scientists and artists can be ambitious, and hope for success in the terms of their profession. Yet, in both art and science there are essential elements of detachment, receptivity, and play.

While one may appreciate something or someone specific, the *experience* of appreciating has a diffuse quality. It spills beyond specific bounds toward a broader understanding. Such understanding may have a more intellectual or more emotional flavor, according to the circumstance and the individual, who may be more attracted to a spiritual, artistic/poetic, social/political, psychological, or scientific path toward understanding. Appreciation may involve some new perception or insight concerning one's

[42] Strictly speaking, a scientific theory cannot be proven, only disproven. Scientists are happy when they manage to propose a theory that can at least be refuted by experiment. New information is gained even when the experiment does not uphold the theory. Nevertheless, the individual scientist may be personally attached to the outcome of his or her work. And there is a tendency among the general public to view the current scientific theory as definitively true.

relationship to experience, to the world, to other people, or to a larger scheme of things. For some, therefore, this can be a deep "cosmic" realization, while for others it may be rather more casual. While it tends to be emotionally moving to some degree, it also involves an important cognitive shift, which I have called the subjective frame. With good reason, attention normally dwells on happenings around us, especially as they relate to our hopes and goals. Attention is often directed toward the tasks we have set ourselves or which others have set for us. This is like the earnest engagement one can experience in playing a game; indeed, games are modeled on the kind of goal-oriented problem solving that occupies much of daily life. Yet, we can also recognize it *as* a game—as a kind of make believe or theater that is meant to be enjoyed. There is a shift in attitude in which we focus on the aspect of imaginative play more than serious pursuit.

The attitude of appreciation shifts gears to an alternative relationship to experience. To return to the painting metaphor, the frame around a painting sets it apart from the rest of reality. What lies within the border is not just another feature of the room; nor is it a window in the wall with a view to the outside. The frame highlights the dual nature of the painting as an object in its own right and also as a *vision* of a realm on a different logical level. A similar shift can occur in our relationship to anything: we can regard experience as a tableau created by the brain. Whatever we believe to be fact can be considered story, delighting in the artistry involved. We can focus on phenomenality as a

subjective impression.[43] This is not to deny the legitimacy of seeing the world as real. Rather, it is to know that we have a choice between *ways of looking*, each appropriate in some circumstances. It enables us to look at the world esthetically as well as literally or realistically, at least when we have the leisure to do so.

The two great mysteries are why there is anything at all and how it is that we are conscious of it: the mystery of existence and the mystery of phenomenality.[44] In Part Two, I proposed a theory of what consciousness is and does. While I cannot tell you why the universe exists or the meaning of life,[45] I can tell you that *appreciation* provides a way to enjoy phenomenality for its own sake.

Meaning derives from the interaction of the organism with its environment. It does not derive from the organism alone or from the environment alone. Many would agree that the quest for meaning is paramount in life. In that case, the possibility that our existence is ultimately meaningless poses an existential threat.

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[43] The nineteenth-century movement in art that explicitly recognized and explored this subjective involvement of the viewer was aptly named Impressionism.

[44] Kant associated these mysteries with two complementary realms: the *noumenal* (the world-in-itself) and the *phenomenal* (phenomenality, the contents of consciousness). By definition, experience gives access only to the phenomenal realm.

[45] At this point, neither can science offer any such testable theory. Religion, on the other hand, typically has angels rush in where scientists hesitate to tread!

But what, at rock bottom, makes something meaningful? What sort of answer is a person looking for when they ponder the meaning of their life or of human existence? In the previous chapter, I proposed that nothing has *intrinsic* meaning, value, or importance. Rather, we *confer* meaning on events, as part of an active evaluation of stimuli, determining what their significance is for survival and well-being. That is the biological meaning of meaning. Because it is an evaluation of external things, that significance *appears* to reside in the external world, in the significant thing itself, in the outward focus. In truth, it is a judgment by a biological agent concerning its *relationship* to that thing. Yet the human creature can imagine other possible relationships and judgments. Indeed, we cherish the freedom to do so. But claiming that freedom carries the possibility of losing meaning.

Choice is idealized in the notion of *free will*. The choosing person is idealized as a *rational player*—one not driven by instinct or automatisms, but capable of making a reasoned selection of the "best" option. But this selection cannot be absolutely free; for, it depends on alternatives presented by the outside world and on internal needs that dictate a preference. A *perfectly* free choice is an *arbitrary* one, with no basis in anything internal or external that compels and justifies it. Choice is ultimately arbitrary for an idealized rational agent who does not depend on the outside world, has no needs, and can even choose which priorities to embrace. (On what basis to choose those priorities, if not some need?) Precisely because of this absolute freedom, such a free agent faces a meaningless

existence! So, while we value and strive for the freedom of detachment, we also fear its consequence, which is the alienated senselessness of the arbitrary. The suspicion that life might be meaningless is the dawning realization that the burden of attributing meaning falls inescapably upon oneself. Certainly, the world plays its part. If we look for it, we can find external justification for our choices, evaluations, and priorities. We can lend them sense and even necessity. But the self plays its inescapable part as well, which cannot be evaded simply by putting attention on externals. We are ultimately free to reject the justifications the world may provide, and even to reject our own priorities and needs.

This understanding of meaning is thus double-edged. One can take a bold satisfaction (as existentialists do) in claiming freedom of choice in the face of natural determinism—in what then may seem to be an absurd world. On the other hand, the awareness that meaning is naturally determined by biology can be depressing, giving a feeling of impotence, futility and doom. If we are no more than beasts (or programmed machines) whose options are predetermined, what is the point of enthusiastically going through motions that nature has fixed in advance, according to its inhuman rules? I believe this dilemma helps to explain the perennial denial that the human being is a biological being at all—certainly not a machine. It also makes plausible the association of nihilism with suicide. It is more palatable to be a non-physical spirit, soul, or mind, free by definition and potentially deathless.

Hence, also, the appeal of simply not thinking about such things! Most of us are programmed reasonably well to survive, at least in the context of modern civilization. We mostly stay onboard with this program, attending to day-to-day matters, taking "reality" for granted, playing the game in earnest, striving to meet our goals as though they matter. In this state of mind, of course, they *do* matter and we respond to any obstacle as some level of emergency. This normal focus on the external world and on "doing" presumes all the built-in values and judgments on which the organism's activity depends and must draw. The subjective frame reminds us that we are doing this focusing. The mystic and spiritual teacher Gurdjieff called this *self-remembering*. It is a change of focus from out there to in here, from object to subject. Since we are normally entranced by the world and our commitments within it, this can be like a sudden awakening. The moment of self-remembering recalls to us that a body with its mind is co-responsible for the appearance that is normally and naively taken to be reality, which includes everything from the literal sensory level to one's political worldview.

While Gurdjieff claimed (which I do not) that self-remembering could also develop the self in some substantial way that could survive death, I propose a different benefit: to enable appreciation. Only by momentarily awakening from the normal daily trance does the world come into focus on its own merits, without regard to personal goals, beliefs, attachments, or well-being. Only then can one appreciate it for its own sake. Only by bracketing experience *as* experience does one savor the

astonishing fact that there is even such a thing: a virtual reality created by a complex organism, the greatest show on earth!

The door to appreciation opens when one contemplates ultimate questions, such as mortality and worldviews. Only by standing far enough back to reflect on matters that by their nature are riddled with anxiety, can one fully appreciate the human situation, which encompasses all conceivable options and paths open to human nature and imagination. If one has faith in science, in God, in a political cause, or even in existentialism, the world will be imbued with meaning accordingly. It will have the sort of meaning permitted and limited by the framework chosen, which will be tied to judgments dictated by the assumptions that underwrite them. These are embraced partly *because* they guarantee meaning, at least when one doesn't look too closely at the fine print. The attitude I propose, however, is not tied to such judgments or beliefs. Rather, it is as nearly unconditional as humanly possible. It is appreciation of *being,* for its own sake, which means despite (or perhaps because of) the potential absurdity, meaninglessness, and hopelessness that lurk outside any protective framework. I do not advocate avoiding such frameworks. For, we must sometimes act, and there must be some basis for that action. Rather, I propose to hold our commitments in a broader context, in which we also savour the predicament we are in as mortal beings who have to make difficult choices in the absence of perfect

information, in a world without intrinsic meaning. Like humor, appreciation is a defiant response to what apparently cannot be otherwise. Sometimes it is a last resort. In the face of our inevitable mortality, all humor is ultimately gallows humor.

This calls to mind the famous Zen story about the man chased by a tiger to the edge of a cliff. He escapes immediate death by letting himself over the precipice on a short vine. The tiger above is snarling, the drop below would be fatal, and a mouse has just begun to gnaw at the vine. While considering his situation, the man notices a tasty wild strawberry growing on the cliff within reach. What is the point of this parable? Perhaps it is the enjoyment the man might at least get in his last moments by savouring the tasty fruit. But for me, the point is rather this: only where there seems to be no effective course of action, no escape, no hope, can one fully appreciate the human predicament and the heroism required to face it.

If the man in the story were a disembodied spirit, the parable would make little sense. The lion could not devour him, the fall could not harm him, the strawberry could have no taste. The body *is* the dilemma—just as it is the source of meaning. Thus, it is also the crux of the disappointment one might feel in a meaningless world. Without a body, there is no stake in the existence, no pleasure or pain, only events to which one has no relationship. If my view is correct, there can be no consciousness or meaning without the body and its self-preserving judgments. And there can be no body without some suffering.

Standing back from the habitual evaluations and concerns that fill our lives, the sort of evaluation I call appreciation is nevertheless grounded in the body and its needs. It involves a compassion for the dilemmas of embodiment, which include the ruthless need to survive by killing other organisms. For the human animal, the dilemma is awareness of personal moral choice, meta-choice, meta-meta-choice, and so on in a burgeoning of responsibility and potential guilt. Consciousness is a function of the living body, in its natural context. Appreciation is grounded in the body; and nothing is more personal than one's body and one's consciousness.

Yet, most religion aims to transcend the body and its needs, even to deny or deprecate them. It seeks to relieve us from the anxiety of responsibility—for example, through the forgiveness of sin, which excuses poor conduct even as it presumes to define it. Ironically, sometimes it proposes to torture and punish the body as the source of sin—which is to say, the source of anxiety. The body is indeed troublesome; its natural programming leads to behavior that the mind or society may judge improper, unsavory, unjust, base, or evil. (What is original sin but the genetic inheritance of our animal nature, transmitted from generation to generation?) We are divided within: an idealized higher self, pitted against a castigated lower self—which means pitted against the body. What this moral hierarchy fails to consider is that valuation itself originates with the body and serves it. Judgments are naturally grounded in the body's needs and limits. The so-called mind-body problem is not merely a philosophical

quandary. It is a social and political issue, and above all a *personal* one. Nothing could be closer to home than a conflict between one's mind and one's body.

While religion blunders into the moral dilemmas of embodiment, science discreetly sidesteps them by refusing to consider values at all.[46] It eschews the special relationship the mind has with the particular matter making up the body. Both religion and science seek rules by which to evade the onerous responsibility of deciding *afresh*, moment by moment, what constitutes reality and correct behavior. The religious person can defer to codified edicts for guidance; the scientist (when concerned at all) can defer to natural laws—the edicts of nature. Both can rely on habit, social norms, and explicit formulas to avoid individual choice and any moral dilemma or anxiety associated with it. But neither can escape the inevitability of choice itself.

The moral imperative of Christ was to love the other as one's self. But which self? Christian theology (as distinguished from Jesus' ethic) traditionally identifies with the spirit in opposition to the sinful flesh. One identifies literally with the eyes and head as the seat of consciousness, more than with the alien appendage dangling below the neck. But this orientation above the neck is misguided if, as I claim, the self is no more than the brain/body's representative in a virtual reality it has constructed. From

[46] More precisely, it values "objectivity" to the exclusion of the subject.

the point of view presented here, the virtual self represents the whole body. This body is one's closest proverbial neighbor, which one cannot avoid but must learn to love as one's self![47] The self is tailored by nature to serve the needs of a particular body, because the brain is "wired" to that body and no other. But that brain can also see its connection to that body as biologically rather than logically necessary. It can choose to consider other bodies on a similar footing as its own. To the degree one cannot avoid other people, one must learn to love their bodies too, as per the commandment!

Yet, it is challenging to love one's body in a culture that is alienated from embodiment. This alienation can take subtle forms. We no longer flagellate the body in the name of spiritual purification; but we often fail to care for it properly, with healthful food and exercise and moderation rather than overindulgence. It suffers neglect when we value mental above physical needs, which is the way of our sedentary society. In some cases, the punishment may be intentional if not deliberate—as in masochism, self-mutilation, accident-proneness, recklessness, etc. But even then, the body is more of a proxy made to suffer in order for the "self" to feel an enlivening thrill, even of pain or danger. Physical culture to satisfy a socially approved body image ("no pain no gain") indulges a similar manipulative relationship. On the other hand, one's body may be used as a pleasure machine, hedonistically to

[47] Even in astral (out-of-body) travel, there is reputedly a thread connecting to the physical body, which if severed results in death.

consume experience as a commodity. Sexual relations are often plagued by such agendas, when the other person's experience is not relevant enough. Philosophy aside, these are real mind-body problems.

One cannot truly appreciate the world without appreciating the body as the special part of the world that one happens to be. Otherwise the body can seem a sort of awkward interface between self and world (when the body is considered the servant of the self instead of the other way around). One cannot appreciate the inner realm of consciousness without appreciating the crucial role the body plays in the brain's miraculous construction of phenomenality. For, otherwise there is an embarrassing blind-spot in the field of one's understanding.[48]

The body's healthful functioning is a wonder of unfathomable intricacy, whose vast complexity rivals the spatial vastness of the universe. One speaks today of the human brain as the most complex object in the universe, forgetting it is no more than one organ of an equally complex organism, which could not exist apart from the same natural history that produced the myriad galaxies. Even when not functioning healthfully—even at death's door—the body often heroically does its best to make consciousness possible right up to the last moments. Surely consciousness can appreciate the body for making its very existence possible!

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[48] The *visual* blind spot, of course, is not normally noticed at all. It is simply ignored by the brain, so that the visual field appears continuous. Similarly, one is normally unaware of how the body's needs shape the virtual reality.

Motion is the natural state of creatures, yet modern sedentary people behave more like plants, passively soaking up impressions. One way to care for the body and celebrate its healthful functioning is through dance and other forms of movement and corporal expression. That includes practices such as Tai Chi, running and power walking, martial arts, and social or choreographed dance. However, these tend to have some goal and a serious ethos; they follow specific norms and forms of motion. They tend to be something one *does*, more than what the body does spontaneously. So, as much as I love social dance, I delight also in spontaneous free-form movement—which might be just getting up to jump around to music in the privacy of my home. The point is to see how the body responds with enjoyment of sheer motion. Or, even without music, to see how it might respond to its own inner impulses.

The body may seem an inconvenience or obstacle—even an enemy—especially when it is not functioning well. One should take care to remember then that it is the job of the self to serve the body, not the other way around. (When feeling sorry for "myself," I recall that I should perhaps instead feel sorry for my body!) Pain and pleasure exist to get the self on board with the body's well-being. The self must help defend the body against external pathogens and help to maintain it against internal decay. It may be tragic when the body fails, but this should not be perceived as a betrayal—all the less if it is the self that has betrayed the body in the first place by not caring for it properly.

Viktor Frankl's famous book, widely known as *Man's Search for Meaning*,[49] is less about a *search* than about the kind of circumstance that can lead to the loss of meaning, and the kind of meaning that can survive such circumstances. In particular, sheer determination to keep the body alive at any cost became the last resort in the concentration camps. Those who lost hope generally did not survive. And those who did survive frequently ended up disillusioned with humanity. (They despaired not only over their treatment by their captors, but perhaps even more over their own desperate behavior in such brutalizing circumstances.) Frankl points to the recollection of loving relations as a source of inspiration that can give one hope to endure the worst of conditions. Such memories spur one on to meet the expectations of others to behave well under duress.

Antoine de Saint Exupéry recounts the trials of an early mail pilot who crashed in the Andes, with little prospect of rescue. About to give up in exhaustion and cold, he recalled that his family would not be able to collect insurance unless the body was found. With that sole thought he staggered on toward some place he imagined his frozen corpse might be discovered, and thus stumbled upon a search party that had been sent out for him. It was this thought for the future well-being of his loved ones that drove him to endure.

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[49] Original English title: *Nevertheless Say 'Yes' to Life: A Psychologist Experiences the Concentration Camp*.

While meaning derives ultimately from the body's concerns, this does not prevent the mind from laying claim to meaning as its own province. It does this particularly through language—the meaning of words, which represent concepts and feelings as well as things. The mind searches for meaning on "higher" levels than provided naturally by biology. Looking back from such heights, it can seem merely redundant that the goal of life is to proliferate itself. The mind seeks a *reason* for living, beyond mere continuance. Above all, it seeks to justify the existence of *this* individual, whether in the social context of other selves or of some cosmic scheme. That does not usually mean the body's purposes, but some larger rationale such as the divine plan or "the purpose of life." Yet it is only fulfillment of the body's needs that allows such schemes even to be conceived.

Modern man seeks to avoid mortality by prolonging life, even indefinitely. Traditionally, one sought to live on in the memories and genes of succeeding generations. One hopes for a satisfying life for one's children, in whom something of oneself would survive. One can also find meaning in making a lasting contribution to the cumulative project we call culture; one hopes to make a name for oneself that lives on, or at least to have some positive effect on the lives of others. Such hopes would be vain if civilization collapses or humanity dies out. Parents of young children now may find it harder to imagine a better life for their heirs, who are bound to inherit a legacy of trying times. Yet, precisely because social values are not set in stone, our current ideas of progress and the good life

are hardly the last word. The experience of the next few generations may lead to values that differ widely from the consumerism, materialism, and technological optimism that characterize present society. What will *they* consider a meaningful contribution? How will they define a meaningful life?

CHAPTER TEN: Esthetic Appreciation

Love can mean many things. It is an ambiguous concept. We love our children, we fall in love, we love pizza and ice cream, we love our technology, we love *life*. Just as anxiety often does not surface as outright fear of specific things, so too "love" need not focus on given events, things, or persons. I have described appreciation as a mode of standing back to embrace a *general* approval—of the world in all its glory, and of the consciousness one is privileged to enjoy. Yet, it may be specific things that touch us and stimulate this sort of feeling. Since I have emphasized the bodily substrate for all meaning, let us begin with the body—one's own body—as an object to appreciate.

Growing up in western culture, love made sense to me as something directed toward others and external things. Directed toward myself, however, it awkwardly did not seem to compute. Perhaps I felt myself to be an unworthy recipient. Or perhaps I was unclear who this self was supposed to be or what self-love was supposed to mean. The question seemed to invoke the same confusing hall of mirrors as self-awareness: endless selves within selves! When I think of loving my *body*, at least there is a tangible object for approval or rejection.

Of course, loving or accepting oneself involves the whole range of what it can mean in regard to others. The same issues and criteria are involved in judging oneself as in judging others, including how bodies are judged. My approval of it, as of other objects, depends on my esthetic

prejudices. While I may judge my personality and my body as presences in the world, *appreciation* is not about that sort of critical evaluation.

My body may not be beautiful, but it's my intimate partner for life. "I" might vanish before it does, but not vice-versa. The self that I am (my CEO, my virtual avatar) is the agent that knows language and speaks of "my" body as though it were something it owned. But if the body (the corporation) could talk, it would speak of the CEO as *its* agent. As its consciousness, I am here by this body's grace. To appreciate the body does not mean to judge it positively, according to the social standards of the day. Rather it means to give it the veneration it is due as the very basis of consciousness.

The question can be turned around: If one cannot love one's own body, how feasible is it to love another's? One may find one's own body ugly and another one beautiful—or vice-versa. That is the sort of comparison that is conditioned by genes and passing social conventions. It may serve a purpose, but it always involves fantasy—a willful idealization. The appearance judged is literally superficial, dissolving upon closer examination. Beneath the skin, one finds cells, blood, and sinews, but no basis on which to discriminate between beautiful and ugly. *On* the skin—under a microscope—one finds all manner of horrifying creatures.

In the case of sexual preferences, partners may attract each other for genetic reasons they do not fully understand. Such attraction is the counterpart of pleasure as an intuitive

judgment of "the good." That a person *looks* good is a first (and provisional) appraisal that they *are* good—suited to one's hopes and dreams. Concerning sexual partners, that may include an unconscious judgment that they carry "good" genes and will be good to one's progeny. Our subsequent experience sometimes confirms this first impression; just as often, we realize the limitations of the built-in judgment regarding appearance. That is why, along with instinct and bias, we are endowed as well with reason, intuition, common sense, and empathy: to qualify and refine first impressions.

The word 'intimacy' means *no fear*. Yet, creatures that are programmed to eat each other have every reason to be wary. Potential mates must somehow overcome the natural avoidance of contact, with its uncertain potential for violence. Playing that edge is no doubt part of the excitement of sex, perhaps especially with strangers. Indeed, *play* is an essential part of all relationship. One plays with a worthy opponent, to test what they will do when provoked. There is a natural *tension* with the other. Comfort, trust, and ease of being with the other are necessary. But so are curiosity and surprise if the game is to hold interest.

On the other hand, one is biased by the long-term intimate connection with one's own body, which through sheer familiarity can set the standard for other bodies. We also judge other personalities and minds by the standard of our self-image. We tend to like what is like us. But, if one's own body seems an alien appendage, how easy can it be to accept the oddities of other bodies? If one identifies too

closely with one's own mind, how difficult to consider the ideas of others!

One is ambivalent about the body because it is a source of pain as well as pleasure. Yet, to "transcend" the body would be to throw the baby out with the bathwater. Physical pleasure and physical pain reflect a fundamental judgment concerning what is good or bad *for the body*. Other judgments (such as moral or esthetic ones) are derived from these basic categories of good and bad, acceptance and rejection, which are grounded in the body's needs. Such judgments are made from the subjective point of view of a particular individual entangled with others in a complex web of interrelationships. Yet, one can also consider this network itself as an intricate whole worthy of appreciation. It is none other than the web of life. Just as God rested on the final day of creation, and found the whole of it good, so the human ego can rest from its desires and fears, and from the labors of its critical judgments, to dwell in the beauty of it all.

Hedonism is commonly defined as the pursuit of pleasure or self-indulgence. The negative implication is that satisfaction might be achieved at the expense of others, of society, even of one's own actual well-being. As a philosophy of life, hedonism is historically and technically the ethical theory that the well-being of the individual and of society can be measured by the subjective experience of pleasure or happiness. But there is a profound difference between using sensations to evaluate events and seeking those sensations as a form of entertainment. By nature,

pleasure (like pain) is properly a *response to a stimulus*, not a commodity to consume. (The CEO, after all, is there to serve the corporation, not the other way around. His or her pleasure must not be at the expense of the corporation.) But there is also a subtle difference between either of those scenarios and the enjoyment involved in appreciation, which is neither the approval of a particular stimulus nor a consumer experience.

While I am not advocating a life of self-indulgence, I do say that bodily pleasure is often a marker of well-being, to the extent that nature has designed it so. While that may seem like common sense, we are barely removed from the medieval judgment of sensual pleasure as sinful and of the body as the prison of the soul. Is pleasure itself improper or is it the selfishness that demands pleasure for oneself without regard for others? If pleasure betokens well-being for one body, then surely it does for other bodies too.

One is more inclined to forgive the defects of other bodies when one accepts the defects of one's own. However, appreciation moves beyond critical judgment altogether. To *appreciate* another's body is to recognize and approve its unique individuality, without acting on the impulse to possess or reject. That means not on the basis of one's personal needs, desires, appetites or standards. This is an appropriate state of mind especially for older men, who continue to be attracted to the idealized feminine beauty of youth even when they can no longer, or will not, act on such desires.

Here is a delicate project of self-management. I do not pretend (or wish) to be rid of sexual desire—which, admittedly, *is* the impulse to personally possess! Yet I must come to practicable terms with it. It is a source of grief to me that the objects of my sexual desires and fantasies are no longer within reach, if they ever were. At least for myself, this sense of loss is a major part of the natural grief at the later stages of life. As a man in his seventies, I confess I have roughly the same esthetic preferences in the bodies of women that I did as a twenty-year-old; but twenty-year-old women are now out of the question. I could judge myself for this, as indeed society could judge me. Yet, there is no remedy but to mourn this loss! As in the classic stages of loss, denial may lead some men to act out their crisis by seeking partners ever younger than them, in order to assert that old age has not overcome them and that the end of virility is not in sight. For some, this drama can continue indefinitely until death puts an end to it.

Biologically, sex is for young adults. It is about making babies to continue the race. Until recently, people did not usually live as long past the age of reproduction as they now do. Nowadays we enjoy sex nearly divorced from reproduction. Yet, sex-for-pleasure trades on the drives, judgments, and capabilities built into a biology naturally oriented toward making babies. This biological orientation has inherent side-effects, such as jealousy, possessiveness, the turmoil that can accompany infidelity, competitiveness, and socio-economic issues surrounding monogamy

and the institution of marriage. The battle of the sexes is a favorite theme in popular music, romance novels, and the cinema. Apart from its reproductive and social consequences, there is no *moral* reason not to enjoy sexual love with more than one person, with more than one sex, or to bind one's life and affections to one individual. On the contrary, however natural jealousy may be, moral indignation at adultery was invented to support monogamy and the nuclear family as social institutions. In sex, as in so many other areas, our modern psychology is out of synch with our biology.[50] The disparity, between the ideal of "free" love and the ideals of family and "true" love, is an ongoing part of the human predicament, which is the dilemma of a creature that seeks to define itself apart from nature, to have its cake and eat it. This predicament is a source of anxiety that must be faced as a feature of the human journey, hopefully with humor and a certain compassion for oneself and others.

Just as one can enjoy and appreciate a painting or a natural vista without needing to own it personally, so can one enjoy and appreciate feminine or masculine beauty without having to possess the person who carries it. There are, of course, compulsive collectors, and our society is founded on private property. But with ownership comes responsibility, including legal liability. Compulsive buying can

[50] The males of many species are genetically disposed to cast their seed as widely as possible, while females are genetically disposed to seek the resources males can provide to insure a favorable environment for offspring.

break the bank. So, too, can sexual involvement with women of childbearing age when children are not one's goal. As a young heterosexual male, I had a rule for myself: never make love with a woman with whom I would not be willing and able to raise a child. This rule applies all the more in my dotage. While some men of my age are still beginning a family, it is not for me.

For a young man coming of age in the era of sexual liberation, it was easy enough to think of sex as casual and without consequence. This delusion permits one to imagine having boundless sexual exploits.[51] But the reality is that any one of these encounters could bind one closely to a particular life and destiny, to the exclusion of all other destinies.[52] Largely by controlling women, men have tried to have their cake and eat it—to have family and to philander on the side. But I am not arguing for marriage and commitment, neither as a social institution nor as a spiritual path. There is no reason in principle why one cannot love more than one person, apart from the troublesome jealousy it might inspire and the sheer economics involved.[53] My point is rather *not to exceed one's means.*

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[51] Indeed, I once read a newspaper account of a man who claimed to have had ten thousand lovers! A character like this appears in Fellini's film *The City of Women.*

[52] Physicists might find it amusing to compare this to the "collapse of the wave function" in quantum theory.

[53] A *social* basis for monogamy is to create stability, for example by preventing a few dominant males from monopolizing access to females. Hordes of young single men with few resources make for an unstable society. Monogamy may also provide emotional stability.

Sexual involvement can be emotionally and materially costly. Genghis Khan sired so many children that he left his distinct thumbprint on the human gene pool. But he had the resources to maintain these children and their mothers, and the power to ignore or limit their demands and the competition of rival males. Old age is a time of shutting down, when youthful enthusiasm has passed and one is obliged to budget remaining time, energy and resources. It is a time for circumspection. When desire is indulged, it should be within affordable limits.

One way I have discovered to enjoy desire-within-limits is social dance. I have been dancing since I was eight or nine years old, beginning with square dancing, when I marvelled at the mysteries concealed under layers of petticoats. I tried several social dance forms over the decades since and eventually settled on Argentine Tango, which has aptly been described as a "three-minute romance." The physical embrace is intimate, yet respectful. Despite the histrionics of stage tango, the *social* dance is more intimate than sexual, more about posture than posturing. Above all, it is about moment-to-moment attention and non-verbal communication. Tango is dramatic and challenging, with a steep learning curve, so that beginners are often eager to show off flashy new moves. At this point in my life and dance career, I am far more interested in it as a form of intimacy with limited liability. I am more interested in the communication and the person than in expanding my repertory of moves or looking good on the dance floor. In short, it has become a path to appreciation—of old friends,

of strangers and new acquaintances, of feminine beauty, passion, of music and movement, the dance of life.

Another way I found to enjoy feminine beauty was through sculpting the female form. Admittedly, the reason the nude is even a sanctioned category of art is that other men before me had discovered this subterfuge and conspired to legitimize it! There is a nebulous line between the nude in art and outright pornography, between esthetics and lust. I will not attempt to draw that line, only to say that what seems to make the difference is precisely the attitude of appreciation. Pornography is vicarious possession, a form of clutching, a fantasy of possessing the object of desire. In contrast, art should invoke an appreciation of the sexual object on formal grounds, or perhaps for the sake of a more sublime vision it can open up. And this must be the attitude of the artist toward his (or her) live model: nakedness should lead to beauty, not the other way around! Of course, over the centuries, many male artists have had sexual liaisons with their female models. I pass no judgment on that. My point is rather that the artist-model relationship is a collaboration, a dance that can be a path to appreciation without sex.

There is a further path to such appreciation, rarely considered and scarcely recognized in our over-sexualized age: the ancient tradition of chivalry, or courtly love. I do not mean opening car doors for women or throwing down an overcoat across a puddle. In the medieval tradition of chivalry, the knights of old held an idealized image of their "lady," who pointedly was *not* their mistress but a muse. This could have been a married woman, but never one's

own wife or lover. There was no impropriety because the relationship was chaste and deliberately romanticized. This love, by definition, was ideal and physically unrequited. What it could do, which sexual indulgence often could not, was to foster an explicit reverence for feminine qualities and values, to tame a group of violent warriors in a misogynist age. Modern men could still find benefit in it.

I live in a rural area in the Pacific Northwest. This is hardly wilderness, but is well forested and far removed from the ethos and noise of the nearest city. Deer come into my orchard daily. Eagles, ravens, woodpeckers and owls frequent the neighborhood (along with the ubiquitous crows, robins, mice and rats, insects and spiders). There are no street lights and the night skies are dark enough to enjoy the Milky Way and the occasional aurora.

I have described the basic human impulse to *remove* from nature, to create artificial environments. But the other side of that story is the human *need* for nature and for natural things, which remind us that the universe was here before us and will be after. Our building and engineering materials, however synthetic, are ultimately derived from nature. They are composed of matter and energy we do not create but only rearrange to suit ourselves. The textures, patterns, colors and rhythms found in nature largely inform our sense of beauty, shaped by our species' long experience prior to urbanization. We are fascinated by geometry and order, but also need the dose of randomness the wild provides. The scientific perception of nature combines these attributes, seeking order within apparent chaos.

Industry and craft seek to impose order on materials whose properties naturally resist these efforts. Art seeks to explore the entire range between order and chaos; ideals of beauty seem to involve a balance between them.

Art and science play special, complementary roles to enable appreciation. Art appreciation is a recognized way to participate in high culture and the creative process. Science education teaches an appreciation for the disciplined quest to embrace the mystery of the world intellectually and through technology. Science, like religion, attempts to close in on serious answers to fundamental questions; art opens up possibilities toward gratuitous playfulness, imagination, and whim. Science dwells on the objective, art on the subjective. Yet, both help us to appreciate the beauty of it all.

According to Keats, beauty is truth. But which truth? Like science and math, Keats' poem[54] is concerned with a timeless ideal, with abstraction and transcendence. He is not talking about the random beauty of wilderness, but about art—indeed, a specific highly symmetrical and geometrical artwork, a Grecian urn. His "truth" is a product of human imagination, imposed upon nature while inspired by it.[55] Science seeks the mathematical elegance

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[54] "Ode on a Grecian Urn," published in 1820, whose concluding line is: "Beauty is truth, truth beauty – that is all ye know on earth, and all ye need to know."

[55] A modern counterpart of such mathematical beauty might be the fractal, a pattern produced by a recursive computer algorithm. Some of these forms resemble natural patterns such as the branching of trees or the shapes of mountains; others are purely geometrical.

in nature—which means the symmetry and order of equations. But these are human ideals, to which nature is not obliged to conform. The "laws" of nature are simplified descriptions of idealized situations. But nature is the actual, not the ideal. It is bigger and more complex than human ideas about it. The human pretention is to transcend natural limits; but it is natural reality that transcends the limits of human thought. Nature is always slightly *other* and *more* than what we think it is—a moving target. Its beauty, therefore, is not confined to the symmetry and order that are desirable because they facilitate certainty, prediction and control. An important aspect of natural beauty represents nature's elusiveness, its chaos and messiness, its independence of us, its inherent grandeur and mystery in contrast to how we conceptualize it, use it, and attempt to tame it. Beauty is a *positive* experience of the awe it inspires, which borders on terror. It is appreciation of the natural world for its sensuality and daunting complexity. What we can learn from natural beauty is to appreciate both nature's magnificence and the intimate *suchness* of all things, which simply are what they are. Beauty is a way of looking.

One can *practice* this way of looking, which is necessary for making art. Conversely, doing art is a way to cultivate this way of looking. To sketch a scene, for example, one must look carefully at the scene as a visual field, noticing all the relationships of figure to ground, proportion, shapes, nuances of light and dark, edges, color contrasts, etc. In other words, by applying the subjective frame! Real objects are deconstructed as a configuration of

appearances or formal elements. One seeks the detail within the detail, trying to notice ever more relationships. Nominally this is in order to reproduce the scene, but it also enhances the experience of seeing. The everyday way of seeing is pragmatic and cursory by comparison. We tend to see only what we need to see in the course of pursuing our goals. But here, instead, is looking for its own sake. In the case of the artist, it is also for the sake of making the artwork, and thus is coordinated with a specific kind of doing. As an exercise in looking, however, one does not have to sketch, paint, sculpt, or be trying to make something. It can be done simply with attention.[56]

Like many of my generation, I experimented with LSD in my youth. Under its influence, I watched a live Monet sunset on a broad sand beach in southern California, where the gold of the sun cast deep-purple shadows in the crevices of the little dunes made by myriad footprints. It is hardly surprising that this was a supremely esthetic experience, since I had recently been fascinated by Impressionist paintings during a trip to Europe. Yet, I suspect the deeper reason for this painterly experience is that the drug facilitates the shift of frame from a normal

[56] For example, choose a small object you can hold in the hand. In a good light, hold it as close to your eyes as their focus will allow and turn it very slowly around in all directions to reveal an ever-changing perspective. Imagine that this small object (say a stone, a nut, or a piece of fruit) is an entire world, a planet slowly rotating. Try to enter this fantasy and concentrate all your attention so as not to miss any smallest detail of the changing landscapes that present themselves as it rotates.

state of mind, with its ordinary concerns, to a heightened awareness of phenomenality itself. Art provokes the same shift, both for the artist and the viewer. To draw, paint, sculpt, or compose a photograph requires one to notice shapes and lines, colors, and other formal elements instead of simply seeing the "same old reality" taken for granted. Even *looking* at an artwork facilitates a resolution of experience into formal elements. In many cases, the artist's style consists in this deconstruction of reality. If the work is representative, we know we are looking at what someone literally has made of the scene depicted. It is that step outside the ordinary ways of seeing that is esthetic and is also the basis of appreciation. Sometimes the scene itself forces this shift, as when we come upon a breathtaking natural vista. But it can also be cultivated, since all experience is a meeting of subject with object. While the artist is in the business of maximizing that way of deliberate seeing, it is potentially available to all. This is one reason people visit museums and art galleries. The more you look at paintings, the more you see through painterly eyes. And to see through such eyes is to look at your own perception. We are all potential esthetes if not artists. To some degree, we have artistic license to play directly with the elements of perception, as the artist plays with them by manipulating materials.

The concept of art has meant very different things to each generation, through history, across cultures, and in widely varying contexts. This makes its ongoing importance throughout the ages is all the more remarkable. Art persists

as a significant category, even now when its definition dissolves into more diversity of expression than ever before. The umbrella term 'art', if meaningful at all, seems to encompass the whole realm of creative possibility.

Like engineering and technology, art establishes the human world, tangibly and symbolically recreating the world to human taste. Architecture provides an environment literally set apart from nature. Painting, sculpture, and design embellish that environment. We move among the things we have made, no longer among the things found in nature. Like science, art experiments with materials. Especially today, however, art presents a sensibility that stands in contrast to the scientific worldview. It celebrates subjectivity rather than a standardized objectivity.[57] The subjectivity of the artist recalls our own subjectivity and the right to perceive the world in an individual and unique way—beginning with how we perceive and interpret the work of art. It reminds us of free will, of the need to play, and of our responsibility for our own perception and behavior. The creative freedom of the artist rubs off on us through the artwork. It is no wonder that the artist, like the scientific genius, is held in a certain aura of mystique.

The history of western art can be seen as a progressive liberation from given constraints such as representation, service to religion, and specific formal principles. Art is free to ignore pragmatic concerns; indeed, it may dedicate

[57] One could say it expresses the right brain reasserting itself against dominance of the left brain.

itself to sheer extravagance. It can defy rationality. It investigates not the creativity of nature but human creativity. Art picks up where science leaves off, sometimes using the same technology, but to explore possibilities imagined outside the bounds of science or rationality—and outside earlier definitions or understandings of art. Art is self-generating and self-perpetuating, because the realm of creative possibility is limitless. The more has been imagined, the more can be imagined. While art frees imagination from realist constraints, unlike mathematics or literature it uses real materials and processes to achieve its expression. Whatever its serious themes, art involves play with formal elements and with the potentials and limits of materials.

Looking back through time, esthetic concerns seem universal and timeless. Whatever their original purposes, ancient artifacts such as the Venus of Willendorf or the cave paintings at Lascaux demonstrate what strike us today as formal qualities. They are hardly what we would identify as realistic, but represent some kind of ideal, if not one corresponding to modern taste. The prehistoric "Venuses" have been so named precisely because, though grotesque, we recognize an idealized vision of woman in them as much as we do in the Venus de Milo or the Venus of Botticelli. Whatever the meaning of prehistoric art to its makers, what comes down to us across the ages are its formal qualities, which we find interesting and mysterious, when not outright beautiful. We admire the skill with which the animals of the cave paintings were drawn, and those intimately etched on bone. But we have only dubious

ideas about why they were made, or what was on the minds of their creators. Indeed, one motivation now for doing art is to try to understand those minds of other eras or at least gain an appreciation for the technical challenges involved. By trying to make the same sort of object in the same materials, artists today can try to re-create the experience of their predecessors. Such experiments are not confined to ancient history. Art students still copy the great masters in museums, perhaps not only to hone their skills but also to glimpse what the other saw.

Perhaps the overall function of art in the modern age is to promote creativity for its own sake rather than for practical, commercial or ideological reasons. Such creativity reflects the need to freely define ourselves and the world we live in, and not to be prisoners of biology, social conditioning, ideology, self-interest, money, practicality, or "reasonable" concerns. In a society dominated by goal-oriented thinking, art reminds us of the spirit of play, the gratuitous, and the freedom to see and enjoy the world in one's own way. For many artists, doing art is a meditative experience more than a means to an end, unless that end is getting out of one's skin or the everyday mindset. As an activity, making art can free one from the confines of bodily needs, the chatter of the mind, daily concerns, the passage of time. Art is then less a product than a process, in which each further step reveals itself, often without conscious deliberation.

For many people, religious icons no longer serve as reminders of mortality, to wake up from the daily trance

before it is too late. In good times, there are few stop signs to prevent us from sailing blithely through the intersections of life. Tragedy and health issues serve that purpose for some. But art can too, even without a supporting religious context. It can lead us to wonder at the mystery of our creative relationship to experience. Esthetic appreciation accesses a non-verbal mode of understanding: to appreciate the intent, intelligence, and playfulness of the artist or author. It proposes alternative ways to view reality through fresh eyes. Art mirrors back to us the workings of our own eyes and judgments, revealing to us the world as beautiful and interesting.

Little awakenings of this sort can happen any time, in humble ways. I was washing dishes in a friend's kitchen many years ago, when to my surprise I pulled from the suds a lovely art nouveau teaspoon. I suddenly saw it as a time capsule, a message in a bottle cast adrift decades before and only then arriving at my shore. It bore a message of *caring*: that someone had bothered with such a labor of love, to craft something of beauty that would endure to personally move a stranger in the future. Probably the mundane context was part of it—a sink full of otherwise unremarkable dishes in an age when so many commercial products are shoddy and without character. These are my judgments, of course, which the unknown artisan answered by sending forth the little spoon.

One takes heart in such experiences. The greater lesson, I think, is that the world can surprise us if we are open to it. I was open, at that moment, because I was intensely interested in the notion that craft can inspire people in the

ways that high art can. Now, even decades later, the experience continues to remind me that I can find solace even in mass produced things. A simple wine bottle can have an elegant shape, rivalling an expensive crystal wineglass. Its label can be pleasing. It can be heartening that someone cared to make exactly those design choices.

Science too is creative and reveals a vision of the world that promotes appreciation. Like art, it deconstructs appearances. The scientific picture of nature, and of human existence as part of nature, may seem coldly austere. Yet, it is as much a *human* view of reality as the religious one or the artistic one. The intention is to see nature, if not as it "truly" is, then at least in ways that are useful for human purposes and make the world make sense to us. Among these purposes is "understanding," which is the intellectual equivalent of the experience of beauty. That may include a heartfelt enjoyment of the intricate workings of nature and of the human intelligence that can fathom them.

The rigor of science guarantees that the appreciation it can afford is grounded in more than imagination or wishful thinking. Because it studies natural reality, science involves more than playing with formal elements, such as occurs in mathematics and art. Scientific thought usually focuses on specific problems to solve, and scientists may enjoy engaging with these challenges. They may also admire the prior monumental efforts that went into achieving the current scientific vision, without which the problem at hand could not even be posed. Yet, the scientist can also stand back to enjoy an overall sense of the

enormity, complexity, and consistency of the natural world, with a reverence that borders on religious or mystical.

Astronomy was a passion of mine from the same young age when I took up dance. Looking up at the night sky, I could grasp that the light from the nearest stars—even at its incredible speed—took year years or decades to reach my eyes. The light from other galaxies took millions and even billions of years. I could gaze at the band of the Milky Way stretching across the summer sky and realize that this is the view from a life-bearing watery rock circling a mediocre star on the outskirts of a typical galaxy: a view looking edgewise into that disk-like swarm of billions of stars. Mundane things are put in perspective. Night itself is a natural time of quiet respite from the daily throb. There is no need to stand back from the stars to get the big picture; they already stand well back from us!

While the ancients knew that the "celestial sphere" must be very remote, only in the past hundred years has the true scale of cosmic distances been revealed.[58] Only in the past fifty years did a consistent geological understanding arise, of when and how our planet formed and transformed, with shifting plate tectonics and catastrophic extinctions over millions of years. An understanding of the cosmos,

[58] Using the 100-inch Mt Wilson telescope in 1924, Edwin Hubble's photographs first resolved the Andromeda galaxy into distinct stars, some of which served as distance indicators, conclusively showing that it lay outside the boundaries of our own galaxy. It was a "Milky Way" in its own right, mirroring the appearance of our own galaxy.

with its astronomic distances and geological time scales, goes hand in hand with an appreciation of the ingenious methods and discoveries giving rise to that understanding. This adventure is part of what makes popular science writing popular.

Like so many of my generation, enthralled by science fiction and space exploration, I thrilled at the first *Star Wars* film. Its vision of countless habitable alien planets led me to see *this* planet as one of them, and we humans as the aliens that happen to live here! Since those days, the search for exoplanets has confirmed that planets are typical rather than exceptional; yet Earth is still the only one we know of that *works*, generating and maintaining life. The history of diverse and weird life forms on this planet alone suggests that life could be very different somewhere else. We are so used to our human shape, thinking of it as the supreme manifestation of intelligence, that we regularly personify aliens in science fiction as humanoid, as though there was something inevitable and essential to intelligence about the biped hominid form. But the history of biology reveals that we are no more than the result of a random walk that has led onto an evolutionary limb from which there is no return. We think of our civilization as destined and entitled to continue on a path of progress begun ten thousand years ago. But that ten thousand years may be no more than a flicker of warmth between lethal ice ages.

Understanding the astronomical and geological context of life enables one to marvel at the whole shooting match. But this retrospective view hardly means that the scientific

theories and ideas of this generation are the final word. While science provides a creation myth for modernity, it is a provisional story that is continually revised and refined and which can take sudden new turns. In my opinion, it is the best story we have about the nature of reality. For me personally, along with art, science has become a way to appreciate the beauty of it all.

CHAPTER ELEVEN: Being in One's Right Mind

It's natural to be caught up in the drama and routines of daily life. Much of our activity, after all, is necessary for survival. Yet, one is sometimes painfully aware of being *too* caught up. It is also natural to think that there must be "something more to life," other possibilities beyond the snare of the mundane. We need at least to punctuate our habitual focus with periods of a softer gaze. And we need some broader perspective to fall back on when plans go awry or habits are disrupted.

Self-awareness includes the ability to recognize and step out of a given mindset or frame of reference, which tends to limit one's consciousness within familiar terms. This is how and why we *relativize* experience, knowing it as personal and momentary, in contrast to a naïve confidence that we literally perceive the world as it objectively and permanently is. This ability to put experience in perspective is crucial for a society of individualistic social creatures with divergent viewpoints in a changing world. If we all thought identically, we might get along quite well and there would be little need to consider experience subjective. On the other hand, without that ability, we might destroy each other simply because we could not tolerate differences. Obviously, both these tendencies are manifest in the world today: a group may enforce conformity within it and also be intolerant of outside ideas. Self-awareness entails a healthy skepticism about one's own beliefs as well as those of others. One understands that there is no truly objective point of view—no god's-eye view—and no

absolute and unchanging truth. There are only opinions more or less well-informed. Despite the claims of religion to a moral compass, collective human opinion is all we have to go on to steer a course.

Nevertheless, one often does get caught up, entranced by some apparently air-tight notion. One can lose perspective, embracing assumptions and beliefs with insufficient reflection, as though they were unquestionable. This is like getting engrossed in the play of a game and forgetting that it is only a game, whose arbitrary rules one has voluntarily embraced.

A game is a conceptual system[59] that defines a self-contained hypothetical world, with its rules, goals, legal moves and penalties. Because it is hypothetical, like a fiction or work of art, the game world is neither true nor false. How it actually relates to reality is another matter. Scientific models are such hypothetical worlds, which stand in for the natural phenomena they represent. They can be treated effectively with mathematics precisely because they are ideal or formal rather than real. Yet, it is important to remember that even in science the model is a human construction; it is not the natural thing it models. While we can never be totally certain how well the model represents the reality, it is tempting and convenient to consider the two interchangeable.

[59] Also known in logic as a formal axiomatic system. Euclid's geometry is a paradigm example. Conversely, the "world" of *Monopoly* or other board games could be axiomatized.

A religion, a political party, a nation, or a social class also defines a game and a hypothetical world. The doctrines, sacred texts and rituals of the religion provide the rules of the game, as do the platform of the political party, the constitution of the nation, or the values, etiquette and social conventions of a given class. In fact, any identity one can take on involves specific assumptions with implicit rules of play. The point is to be able to see that identification for what it is and not be trapped within the world of that game.

Games, stories, theories, and other artifacts are well-defined and finite; they are created by intelligent agents. The artificial "world" thereby defined bears those same characteristics, whether it be the world of *Monopoly,* the world of *Pride and Prejudice,* the world of quantum physics, or the world of the Bible or Koran. Any such world is strictly a *product of definition*, even though it may mimic, or refer to, certain aspects of the real world. Like the novel, you know it is a human invention.[60] Yet, one often gets caught up in it, confusing the game with reality in a willing suspension of disbelief. We have seen that this is a key to the very nature of consciousness, which involves two capacities: the ability to be engaged and the further ability to disengage.

The natural world, however, appears to be a different matter. It may be convenient to think of it as a sort of game,

[60] Of course, the religious believer trumps this objection by believing everything to be *God's* invention, instead of believing God to be the believer's invention!

whose rules are the laws of nature and whose playing pieces are the entities of physics, chemistry, or biology. It is even more convenient to think of it as the invention of the divine mind. Nature, however, does not come prepackaged in a box like a board game. The rules and elements are not specified in advance, as they are in a sacred text or a scientific theory. They must be discovered. Except in limited ways, one cannot predict the course of the game. Nor can one escape the natural world except in imagination. The playing field may be infinite in extent and infinitely complex. As far as we know, nature is not an invention, a product of anyone's definition, or made by an intelligent agent.[61] It just is.

Games provide very limited possibilities defined by a few rules and features. That is both their advantage and disadvantage. In the world of chess, for example, the knight can move only in L-shaped jumps between squares. This sort of rule makes the game orderly and possible. An adult walking in that obsessive way in real life would be viewed with suspicion, perhaps locked up! But such a world is its own prison. There is nothing to do in the world of *Monopoly* but buy and sell properties. From the hypothetical point of view of someone living in that world, life would be very limited and dull. Nothing would exist, or even be imaginable, that did not appear on the board or

[61] Certainly, the natural world *manifests* intelligence, but my point is that this intelligence is not an agent separate from the world itself. Neither a board game nor an automobile could create itself, yet it is possible to conceive that the natural world is self-creating.

come in the box. Yet, this is actually the sort of limitation one routinely accepts when "thinking inside the box." One then assumes one knows the rules of the game, which seem normal and natural. One identifies with a particular state of affairs, or with a group, activity or ideology. This is the downside of embracing meaning too readily. One forgets that reality is fluid and bigger than specific concerns or ideas, however momentarily convincing they may seem. One forgets that it is only a game and that the game can suddenly change.

A prolonged trance of this sort has aptly been referred to as *sleep*. Wake-up calls often involve a health scare or a brush with one's own mortality or that of someone close. One suddenly looks at life in a different way, re-evaluating priorities, awakening to a new clarity and new possibilities, often with a deeper appreciation for being alive and for the gift of one's particular life. It is not necessary, however, to wait for accident, illness, or a global catastrophe to awaken from sleep-walking through life. We have the ability to intentionally step outside confining habits and attitudes at any time, to remember our essential freedom and agency, to self-remember.

One feature of the trance of ordinary consciousness is self-talk, which functions effectively as self-hypnosis. The mind's inner chatter is a ceaseless narrative about an adopted world, its urgencies, and one's place within it among other players. This serves to keep us in the confines of that world as "normal," comfortably engrossed in our reveries, as though they were strategies in a compelling

game, even if only for the sake of entertainment. That is why some spiritual traditions advocate quieting the mind, practiced through some form of meditation or mindfulness discipline.

Daydreaming can be dangerous when it interferes with sensory information crucial for survival—for example, when crossing a busy street. To respond fully to another person (to "really hear" them) also requires that one's attention be free from interfering internal narratives. On the other hand, processing real-time sensory input is not the only mental activity important for our well-being. Animals are mostly limited to it, but people rely also on imagination, reason, planning, and directed thinking to create and maintain the human world. It is a question of consciously directing attention where appropriate. The admonition to "be here now" does not mean that physical sensations are inherently more worthy of attention than thoughts or reveries, which also occur necessarily here and now. There is no moral reward for deliberately excluding mental chatter in order to pay attention only to physical sensations. Such a practice is a valuable exercise, as training to direct attention consciously. However, the point is not to restrict attention to one kind of object, but to strengthen the attention muscle. Mindfulness is not an escape from the mind but its disciplined use. It trains us not to shun thinking but to do it responsibly and well. Chopping wood and carrying water with one's full attention may be good for body and mind alike; but it is less relevant in modernity than being fully present to

mental and social tasks that require clarity and presence of mind in a rapidly changing world.

Absolute objectivity is not even a coherent notion, once the existence of subjects is admitted. Nevertheless, self-awareness fosters *relative* objectivity. If we cannot see the world as it truly is, at least we can see it in a more comprehensive way, which means stepping outside the box one happens to occupy, however comfortable or suitable it may seem. Yet, the view from that larger perspective is still a view from *somewhere*. It is not the view from nowhere to which objectivity pretends. One must still claim responsibility for one's unique outlook, in the faith that it is at least moderately more encompassing than before. The problem is that a modicum of improvement can lead to the unjustifiable conclusion that one has at last seen how things truly are. Even scientists are not immune to this folly, sometimes believing their generation on the verge of final answers to nature's mysteries.

The paradox of relative objectivity is that the path to it is subjective. For, all views take place from some particular viewpoint—even literally, from a unique position in space and time. The lesson to draw is to exercise moderate skepticism in regard to all claims, including one's own. One holds mental reins in check by questioning leaps of faith, bad information, grandiose schemes, faulty reasoning, false assumptions, unfounded intuitions, misplaced emotions and hidden motivations. (Of course, this is always hardest to do in regard to oneself!) To be skeptical, however, does not mean to reject an idea or course of

action, but simply to remain tentative when in reasonable doubt. It means suspending judgment, pending further information. Above all, it means tolerating a state of uncertainty. I call this attitude the *stance of unknowing*.

Simply *not knowing* tends to be intolerable for human beings, who seem compulsively driven toward certainty even when it cannot be well-founded. The willingness to *not* know, to be *un*certain, may be one of the most difficult and valuable human skills. Such an attitude is necessary to balance the mind's fundamental stance of thinking that it can and must know. The need to know arises naturally from the brain's mandate to find a decisive interpretation of experience. Creatures have always had to make split-second decisions about when literally to leap. That may have served well on the savannah; but the modern world is vastly more subtle and complex. With modern concentrations of power, impulsively leaping to the wrong conclusion could spell the end of the world. Skepticism is looking before you leap, gaining time to reason and consider further. The stance of unknowing is a state of mind in which one remains vigilant, yet abides uncertainty because a false move could be devastating. Cultivating that tolerance for uncertainty has many benefits, given that the human existential situation is that *we know nothing at all for certain and should take nothing for granted*. The stance of unknowing can help us relax in the face of holy terror.

This is all the more important in an era when there is an overwhelming glut of information online and in social media, much of which is unreliable, at the same time that traditional institutions for vetting information are eroding.

That itself is a source of anxiety. How do we know what to believe in a free-for-all of opinion, gossip and slander? What news is genuine and what fake? Which voices to trust? In the absence of information in which we have confidence, an interim solution is to suspend judgment. We have the option simply to remain uncommitted, to not feel obliged to know the truth or be compelled to have an opinion, much less to act. Much of the information we get from the news or social media is trivial or else pertains to events about which there is little we can do. We can focus on the issues that do concern us and over which we do have some control. We can educate ourselves broadly enough in those areas to intelligently vet the relevant information ourselves. All of that is time-consuming, of course. Yet, looking after one's worldview and political opinions is a civic responsibility, as much a duty as looking after one's health.

It may be hard to relax the compulsion for certainty, which tightens the mental grip. After all, certainty may seem justified in situations where predictions can be verified after the fact. On Monday the weather bureau may predict that it will rain on Tuesday, and we know by Wednesday whether that belief was justified. Yet, weather predictions are only moderately reliable. They are based partly on past records and partly on extrapolation from current conditions. Metaphysical questions cannot be verified like the weather, let alone analyzed statistically. To be certain of them requires what Sartre called *bad faith*. This applies to religious predictions, such as life beyond the grave or the

second coming of Christ. But it applies to medical prognoses as well, when patients place unwarranted faith in a cure simply because they cannot abide the uncertainty of their situation; or, when they place too much faith in a prognosis that seems to condemn them with unwarranted certainty. Bad faith ignores both the subjective need to *feel* certain and the fact that total certainty is never justified. It deliberately ignores the personal choice involved. Rather than reflecting reality as it ought, certainty is then no more than a state of mind preferred to anxiety.

Dogma of any sort abounds in unequivocal decrees that cannot be easily tested by experience or countered by reason or common sense. These may be claims about what exists in a metaphysical realm that is conveniently invisible or future. I do *not* claim that no invisible realm exists (atoms are invisible). My point is rather that dogma is asserted and believed expressly where it cannot be easily disputed, when facts are irrelevant and the aim is not truth but the security of certainty.

When science began to contest biblical beliefs about the creation of the world, theologians first retreated into a less literal interpretation of the time frame ("days" of the Bible equal to geological eons), which was harder to challenge. As science continued to encroach on religion to provide our culture's mythology, the religious response was then to attack the methods of science as tentative and uncertain. But such an argument only underlines the preference for an account that values certainty above evidence. The tentativeness of science is its strength, not a fault. Political dogma is similarly problematic when it is

believed simply because it relieves anxiety or social tension.

Certainty is certainly ideal, but it hardly guarantees truth. Beliefs are not made true merely by feeling sure about them. Ironically, one is actually in a poorer position to know the truth if one is too insistent on the *feeling* of certainty. The excessive claims of others to certainty only raises eyebrows (they "doth protest too much"). Likewise, one should be suspicious of such claims within oneself. Toward that end, one must disentangle the feeling of certainty from the content of the belief. That is, one must apply the subjective frame.

Curiosity is a better starting point than desire for certainty. It is natural to want to understand the why and the how of things, for we are natural-born theorists. Trouble arises when finding an answer becomes more urgent than exploring the question, the outcome more important than the due process. The mind's natural tendency is to formulate a grand all-encompassing scheme to account for things in a tidy way. We like to have all bases covered, the holes and blind spots filled in. This tendency exists in scientific theorizing as well as in religious dogma and political ideology. It is the essence of conspiracy theories. It reflects the mind's desire for a final, unified, uncontestable account: one that is utterly reliable because it is both simple and *complete*. But no such complete account is feasible if we are to respect reality. Whether expanding human thought can ever catch up to the complexity and vastness of the universe is an open

question. Similarly, social reality is bigger and more complex than partisan views and social or economic theories. It is an ever-moving target.

Many scientists now believe that a final theory of the universe is possible and that we are closing in on it. Yet, that sense of closing in is a perennial folly with a long history. Scarcely more than a hundred years ago, on the eve of the two great modern scientific revolutions (relativity and quantum theory), some scientists believed that all the major discoveries had already been made and there was little left to do but fill in details. This desire for a final truth is not so different from the attitude with which people come to bible-study classes, search the astrology column for clues to the future, or turn to conspiracy theories. The underlying assumption is that reality, while subject to interpretation, is perfectly knowable and that one is in a privileged position to know it. The conviction that we can know the truth in some complete and final account assumes that reality can be mapped perfectly by thought and word. But any map is only symbolic, selective, and sketchy.

As a non-theist, I prefer the scientific map to the religious one. Despite its limitations, I have more confidence in science as a guide to reality than either religion or politics. For, science deliberately disciplines the subjectivity behind its pronouncements. It has skepticism built into its method. It gives veto power to nature as a check upon its claims. It embraces a common language: mathematics. It is cosmopolitan and non-sectarian. In contrast, both

religion and politics tend to be divisive. They value simplistic promises over external evidence and the real complexity of issues. Nevertheless, it is *theology* that I reject in principle, not religion. Theology squanders its opportunity to shed light on human nature. It absurdly treats as objective realities subtleties that would better be perceived as inner psychological truths.[62] Similarly, one cannot dismiss democratic process because of the ruthless demagoguery, corruption and lies of some politicians or the vulnerability of people to ideological nonsense.

In spite of preposterous theology, religion offers community, fellowship, ethics, and (through its art and architecture) culture. It offers the social bond of communion with others and can serve as a reminder of decency. It *can* offer an attitude of humility before the Great Mystery. The fly in the ointment of religion is *reification*, which religion itself calls idolatry. That is the tendency to focus on an objective spiritual reality, when what is called for is a shift in focus from the object to the subject, from the outer to the inner. (As Jesus remarked, "The kingdom of heaven is within you.") In that sense, all theology is idolatrous. Monotheism is merely a refined version of the idol worship it rejects. The advantage of the abstractness of monotheism is precisely that *no* mental image of the divine is condoned. When *truly* no object is conceived,

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[62] The word *theology* itself literally means "word of god." The doctrine of the Trinity, for example, might contain some psychological insight if it is not taken too literally. But the absurdity of the idea that Jesus was literally sired by God with Mary led to major schisms within Christianity itself.

attention remains perforce with the *subject's* attitude and agency.

Religion prescribes surrender to the will of God. Yet, surrender is paradoxical. The understandable logic of surrender is to relinquish one's egotistical willfulness. ("Not my will, but thine be done.") The tricky part is when this internal gesture of letting go presumes a notion of what or whom one is surrendering *to* and an expectation of getting something in exchange. Such a presumption is but another assertion of the self. In other words, it is precisely *not* surrender! The abundantly available human model for surrender is submission to a more powerful or capable *person*: a "higher power." It suggests submissiveness, with a hope for benevolence from the dominating party. This military-political connotation is derived from a long primate history of social hierarchy and a long human history of violent conflict within and between groups. But the *spiritual* version of surrender is rather about the individual's *internal* conflict.

Most of us do struggle within ourselves from time to time. The inner CEO does not perform its duties without dissention among a squabbling inner board of directors. Freud recognized such internal strife by theorizing an unholy trinity of inner agents contending for control: ego, superego, and id. The id represents the raw biological needs and drives of the organism. The superego represents the needs of society, whose voice has been internalized as conscience. The ego is the agent whose thankless job is to

reconcile these contending forces—caught between a rock and a hard place.

In the spiritual version of this inner strife, the ego pursues selfish interests in opposition to higher wisdom. (The original sin, after all, was disobedience.) The parental voice of the superego tells us what we *should* do or feel or think. This imperative is writ large as the divine will, to which one is supposed to surrender one's headstrong ways. This is not only for the good of society but especially for the good of one's soul. What is essentially a beneficial *ethical* system, to regulate behavior toward others, is internalized as a directive for one's own *spiritual* well-being, enforced by rewards and punishments.

Of course, there are also sophisticated variations of this dynamic. The notion of spiritual evolution considers life an opportunity for self-improvement. In the soul's journey, human embodiment is a stage in one's ongoing education, a temporal classroom from which to graduate to higher studies, perhaps in new incarnations. In such ideas there is an implicit hierarchy of values, a notion of progress, and a cosmic theory of reality that can justify why those values should be pursued. It might explain, for example, why spiritual development is important and why one should be compassionate to others in their attempts to learn.

In any case, surrender *can* play the role that I believe it properly should, which is to resist ideas about what exists. This reluctance to reify downplays the role of the object (e.g., God) and emphasizes that of the subject—without making the subject into any sort of object (such as the

soul). Surrender is then an *attitude* toward experience without expectation. It becomes an intransitive verb, so to speak. One surrenders nothing in particular, and to no one and no thing, not even to a "higher self." One surrenders simply because the gesture itself is liberating. It is not a means to an end other than freedom, not in pursuit of a promised or hoped-for reward. This kind of surrender is the role of prayer as I can understand it.

People often turn to prayer for divine help, as a child turns to a parent, when other strategies have failed. Sometimes they turn to prayer for guidance in their desperate inner struggles. The tricky question is then: who is struggling against whom, and for what? The very point of prayer may be simply to raise the question: who do I think I am? For, to struggle with oneself presumes a self that one actually is, another self that one would rather be, and a third self who adjudicates the struggle. That might be the struggle between a higher and a lower self, or between some demeaning self-concept and a desire to be free of that concept. It might be the struggle between one's aging self and a younger self one would rather be. In any case, a judgment is presumed about how things are, compared to how one would like them to be. Who makes these judgments and by what right?

Surrender is simply giving up the struggle, which is always someone's struggle to have their way. One lays down the usual weapons and strategies for avoiding confrontation with the unknown—even the unknown within oneself. One turns instead to face the anxiety itself.

Can humanity live well without gods? Can mankind uphold its cherished modern ideals of *liberté, égalité, fraternité* without appeal to an absolute transcendent order to provide a moral compass? Certainly, many individuals have led a virtuous life without believing in a divine agency. Yet, the question of whether humanity collectively can achieve this is quite another matter. For, society seems doomed to ethical failure even *with* the guidance of religion. No matter how many nominally good people there are, by any account there will always be bad apples who spoil the barrel, taking advantage of the decency of others. Atheists may argue that religion is not necessary for a virtuous society and may even hinder it. Religious believers may argue that universal moral values cannot be derived from the scientific-materialist worldview. Both camps may be right, but they are arguing at cross purposes.

It is true that moral values cannot be mined from scientific accounts. Nature does not operate on moral imperatives but on natural selection. Yet, it is beside the point to seek a naturalistic origin or justification for human values, since the human being is the creature that is not content within the natural order in the first place. We are the species with one foot in each of two worlds. However successfully or not, we *strive* to create our own order outside nature. Yet, religion is but one means we have contrived to escape the natural bounds. *All* of culture serves this end, and now technology in particular.

God represents a personification of the grandest human ideals. These include not only ethical values but also the quest for omniscience, omnipotence, and immortality. We

seek to *become* gods ourselves, not to merely worship them and be under their thumb! Technology, rather than religion, is the modern means to achieve a god-like status. (In that sense, religion may indeed be an obstacle to human empowerment, preserving a meek dependency on a parental figure.) Religion has failed not only to make us universally good but also to spare us the dangers of hubris. It has not prevented us from reaching for literal immortality, the tree of life.

On the other hand, regardless of whether the technological goals of immortality, omniscience, and omnipotence are even feasible, one may yet ask whether they are wise. Perhaps they merely reflect the natural drive for dominance built into our animal nature. If that is the case, then do they really serve the impulse to be free from natural causes and limits? How do these goals relate to ethical values, to the ideal of a perfect and harmonious society? Should religion be about gods at all—about what does or doesn't exist in some metaphysical realm? Or should it be about *attitude*, about the subject rather than the object, about "in here" rather than "out there"? If neither science nor religion can give us the guidance we need in this stage of human evolution, where can we turn except to our own inner resources?

CHAPTER TWELVE: How to Embrace Mortality

I have sympathy for the human project to differentiate from nature, which includes the hope to be freed from the yoke of mortal embodiment. I am intrigued by the biology of senescence and admire scientific efforts to extend healthful life. Personally, however, I don't fancy living forever. All that I cherish about my conscious experience I understand to be a transitory consequence of this physical body, which will falter and fail in the natural course of things. Beyond my attempts to communicate through writing, I don't believe this mind is so special that it must be preserved for posterity, any more than this body is so special it merits a place in the world forever. Because I understand my "self" to be an extension of this body, I have no faith in either the religious pipe dream of an ongoing consciousness beyond death, nor in the technological pipe dream of uploading the mind to cyberspace, where it can supposedly carry on beyond the demise of the body. While I respect the heroism of these quests, I don't believe that either is plausible. But neither do I find immortality desirable. I do not look forward to a life after the death of my body, nor believe that disembodied consciousness is possible.

Life begins for each of us full of unspecified and seemingly limitless possibilities. At birth, the world is a big unknown. Childhood is a wide-eyed discovery, learning the ropes of the world as adults have defined it. It is also about fantasy and discovering the inner world of phenomenality. With

any luck, we grow up sheltered by caring parents, who bear the burdens of reality for us, freeing us to play and imagine, at least for a while. To the young person, full of dreams and idealism, life is unfolding, ever opening up. To the elderly, whether they admit it or not, life is shutting down. In between, a gradual changing of the guard is sometimes punctuated by key events.

At my fiftieth birthday, I pictured the trajectory of my life as a continental divide, one slope rising toward a peak, which slowly tapers off on the other side. It was sobering, but neither shocking nor depressing, to think that I had reached my peak. There was simply recognition that I had graduated from one phase of life and was now entering another. At fifty, and without children, I thought that this new phase should be less about personal enhancement and exploration and more about giving back a contribution to society out of what I had learned. This was less a resolution than an intuition about the structure of a human life. It was an intimation of things to come and a guiding metaphor that would lead to the concerns of a third phase, which I seem to have entered in my seventh decade. For me, this third stage is about completion and wrapping up.

One feature of this structuring of a life is that possibilities narrow over time. The more we learn and think we know, the more crystalized reality seems to become. The development of the brain throughout childhood and after is largely a process of weeding out neural connections that are not functional. Learning is a process of focusing, of discarding options, losing plasticity and becoming more

fixed. Yet it also involves the ability to form new connections.

Growing up in middle-class white suburban America, my concepts of social and political reality were fairly naïve. There were many things I simply took for granted or never thought about. There was a kind of innocence in such ignorance, a continuation of childhood. Travel to Europe in my late teens, and again in early thirties, opened my eyes to other ways of living and of thinking about social realities. When I began to deliberately educate myself—post university—I gained a more comprehensive understanding of both the human and the natural worlds. The excitement of new understanding was heady; I began to see unsuspected connections between things in a more integrated overview. But it was also subtly tinged with disillusion. For one thing, the more I learned, the less hope there seemed that humanity could save itself from its worst inborn features. For another, while personally satisfying, increasing understanding of the complexity of how things work seemed to narrow the possibilities for me to personally make a difference.

I am sure I am hardly alone in despair over the state of the world and one's insignificance as a force for change. In old age, youthful idealism has given way to the embarrassing realization that by now I've mostly spent my limited opportunities to make a difference. Because my "words had forked no lightning," the impulse to "not go gentle into that good night" is more of a romantic

sentiment than an expression of realistic intent.[63] On the other hand, I am not crippled by pessimism. Despair, after all, is merely another dubious sentiment! The world is full of surprises, as the recent global pandemic proves. Who foresaw the dismantling of the Berlin Wall? I cannot know how well coming generations will cope with their challenges. I would love to return for a brief visit in five hundred years, just to see how things have turned out, though that experience might be utterly confounding. Whatever the reality then, it will not be the end of the story—because reality is not a story at all.

What I do know is that my own abilities, mental and physical, are waning and I must budget my energies. At the same time, having journeyed around the solar system a few dozen times, my interests in life are hardly the same as in youth. I continue to educate myself, to learn new things, though most of these now seem like details in a tableau whose general outlines are glaringly familiar. I often find myself tired in body and in mind. I am less keen on *doing* of any sort, which becomes physically ever more challenging. While I am not in a hurry for my life to end, what I look forward to in death is a peaceful rest, an end to cloying consciousness with its aches and pains, its urgencies, its hopes and disappointments.

Yet, for some people, the end of consciousness is terrifying. Others simply assume that consciousness doesn't depend on the life of the body and will carry on after death. Or, that it can be artificially distilled from the brain and

[63] Ironically Dylan Thomas died young, at age 39.

kept going somehow after the brain dies. For these people, consciousness is intrinsically desirable; or they believe "they" will continue to exist with or without a body. I agree that consciousness is a marvel of the universe, to be cherished; it is integral with the mystery of existence. But that appreciation is distinct from any desire for "my" individual consciousness to carry on indefinitely. Just like fine art and beautiful women, one can appreciate consciousness without having to possess it.

The traditional notions of immortality make little sense to me, for they have nothing to do with the life of the body. On the contrary, I believe that all perception, feeling, and thought are functions of the body and have no meaning without it. What could pain or pleasure be to a bodiless spirit? What would a disembodied spirit *do*, and why would it do anything? If such a consciousness were possible, it could be nothing like the experience of living human beings.

If it were possible, through technology, to indefinitely renew the body (and the brain as part of it), would this "refreshed" person still be *me*? If not, why would such a *renovation* be preferable to a *brand-new person* that starts out from scratch? Would it be worthy of preservation because of accumulated knowledge, experience, and wisdom from which society could benefit? (Nobody seems to listen presently to the wisdom of most elders, if in their dotage they are wise at all!) If it were feasible to upload a mind to live perpetually in a virtual reality in cyberspace (i.e., in a computer), would that existence be heaven or hell? I have characterized our natural phenomenality as a

virtual reality that serves the real reality of the body. What would be the point of an artificial phenomenality that serves nothing real?

Whatever one's views on life after death, or the possibilities for immortality, one must agree with Bette Davis that old age is not for sissies. I hope I have provided some convincing ground not to fear the end of personal existence. But, how can we count the decline of the body as a blessing? How can we look forward to the physical misery, psychological degradation, and loss of ability that seem so often to accompany the modern way of dying?

These are not rhetorical questions, but real questions I ask myself. While it makes no sense to me to fear no longer existing, I am apprehensive about a painful or humiliating end, or a reduced state of competence. Then, too, the idea of leaving behind a corpse for others to deal with is frankly embarrassing. Still alive, the aging body continues with embarrassing remnants of its impulses to survive and reproduce. Though old age has not relieved me of desires, my vitality and libido are waning. The prospect of deteriorating body and mind is reason for profound grief, along with the remorse over diminished or lost opportunities, wasted time, poor choices, and ultimately one's loss of the whole world. I can easily lament being this wrinkled and doddering version of the boy I remember, with its narrowing prospects and foreshortened future.

In the final analysis, however, so long as one is alive one has to be *somebody*—which is to say, some particular body at some particular phase of life, which constantly

changes. That is reality, as opposed to fiction and fantasy in which one can—like Peter Pan—live on in unchanging youth. The march of time narrows possibilities, finally down to zero. Genetics first selected among the possibilities for this body and its mind; then circumstance, education and upbringing made further selections; and personal choices narrowed the course of this life even more. Whether I bless or curse my stars, this life had to assume a particular shape. Whoever I would become, whichever direction life would take in me, could only be singular. I might have become someone else, but I could not become *everyone* else. I might regret not having had more effect on the course of history. But I have had *some* effect, if only by taking up space within the world and using (or not using) its resources. I see that the disproportionate space that some people have taken up has hardly been for the greater good! Human thought is foolishly short-sighted about the consequences of well-meaning projects, let alone less benevolent ones. It will not be me who pushes the button that destroys the world, nor will it be me who saves it. But perhaps the world does not need saving so much as appreciating. One talks glibly about saving nature. Yet nature has never had a thought (except in the minds of human beings) to save itself or any of its extinct manifestations. Nature is simply what it is and you and I are the parts of it that we are.

Old age is the far tail of the bell-curve of life. There is some symmetry, since old age resembles infancy in some ways. It is no fairer to judge the deficiencies of old age by the standard of the peak of adulthood than it is to judge the

incapacities of the baby by that standard. We are patient with the infant for what we hope it will become, and we should be patient with the aged for what they have been and will be in our memories. For better or worse, we live in a population whose median age continues to increase even as we continue to overvalue youthfulness. The expectation for health and quality at end of life is falsely modelled on the experience of youth, to continue peak performance indefinitely. With our ideology of progress, we expect not a bell-curve but an upward slope forever, or at least a levelling off on the far side of the peak. But the lesson of the natural shape of life is a decline potentially as steep as the learning curve at the beginning. Elderly people considering medical treatment for possibly terminal illness should bear this in mind. Treatment may extend nominal life for an additional few years, but at what cost in quality of living? If the treatment itself doesn't kill you, it may make you miserable for a significant portion of your remaining days.

Of course, grudging acceptance of the grim facts is a far cry from *appreciating* the decline of old age. However, the elderly in our society are in some ways a privileged class, many enjoying the pensioned benefits of retirement from the work force and parental duties.[64] Apart from such social benefits, knowing that death is on the horizon and could happen any time is liberating in some ways. There is the kind of relief that one experiences when a lengthy and

[64] See the Postscript, which discusses the efforts of society to selectively protect the elderly from the Covid19 pandemic.

demanding project nears completion. Knowing that decrepitude lurks around the corner, one is grateful for the body's persistent functioning, one amazing day at a time. Knowing that the moment is imminent when the world will slip out of reach, one savors its miraculous reappearance in consciousness, minute by minute. One relishes whatever one can still do. Just being here seems icing on the cake, more a privilege than the right or obligation it might have seemed at an earlier age.

In the middle ages, many people kept a human skull around to remind them of their mortality, of the limited time remaining at their disposal. If only as a thought experiment, a modern version of this *memento mori* could be a digital clock or wristwatch that runs backwards from the appointed time of one's death. (Like some scientific clocks, it should display rapidly changing decimal fractions of a second, to more dramatically emphasize fleeting time.) Of course, one doesn't *know* in advance the actual time of one's death. But, there are actuarial tables one can consult to know at least one's statistically predicted life expectancy.[65] You would set this Death-Day Clock to this expected date and watch your remaining time run rapidly down, like the sands emptying from an hour glass.

I am half way through my seventh decade. I could feasibly live another twenty years (if I defy statistics), or

[65] In fact, there is a website that does this: www.death-clock.org. You type in your birthdate and other personal data and it tells you the date on which you theoretically should die.

perhaps no more than another twenty days or not even twenty minutes. The point is that I *don't know*. And that unknowing is a positive thing, putting things in perspective and fomenting appreciation in place of the anxieties and hopes that belong to an earlier phase of life. After all, it is hope and obligation that keep one in the game, making one anxious for desired outcomes. While the sense of compressed time may add pressure to remaining choices, one is also in the process of letting go. Precisely because the options themselves are rapidly shrinking, with major decisions already made and lived out, the hazards of choice can be far less a worry in old age. On the other hand, one is more conscious of the need to budget remaining time. Priorities change. I find myself less patient with nonsense, especially with those who are old enough to know better—beginning with myself.

I continue to be engaged in new intellectual projects, to welcome new friendships. At the same time, and overall, this phase of life is nevertheless about completion. The practical aspect ranges from having my last will and testament in place to ensuring that my best thoughts have been put into words and these made accessible in print or online. Yet completion is not only about specific projects and practicalities. It is above all a general attitude, appropriate to a time of life. It does not preclude beginning new ventures, but these are likely to involve circumspection, a reasoned consideration of what can be completed, what cannot, and where it doesn't matter.

There will come a literal day when that clock has run down and I must say goodbye to it all. It seems that people

used to sense when that day was nearing. They would call family and friends to the bedside to exchange farewells. Our culture has mostly lost that intuitive knowledge, abandoned in favor of the pronouncements of medical experts—largely based on statistics—as to when and how one can expect to die. The bedside is now frequently located in a hospital or long-term care facility rather than the home; it is attended not by family and friends but by "health" professionals who are actually sickness professionals. Old age and death are considered forms of disease rather than stages of life. The medical focus is less on promoting health and wellbeing than on delaying death at any cost. This has resulted in ever more people ending their days in a health limbo, the dying process prolonged. In such a state of putting off the end, it is unclear when it should or will come. The dying person may not be lucid, kept only technically alive. Those being left behind may take the opportunity to say goodbye, for their own sakes; yet, the dying person whose mind has been compromised may have already missed that opportunity. It is wise, therefore, to consider leave-taking in a broader sense, as an ongoing attitude. "Fare well" is a blessing one offers to others on their journey. But why wait for your last breath to give your blessing? "Goodbye" is a contraction of "God be with you." Whether or not there is a God, why wait to bless others, to convey your wish that goodness should follow them all the days of their lives?

There are also ways to bless oneself. Taking care of the body is one. There are many reasons for the general decline

in quality of life in modern society despite medical and sanitation advances. Some are environmental, some economic, some genetic. Some are also iatrogenic. That is, medical science itself is to some extent responsible for this decline, particularly through the development and indiscriminate prescription of drugs, many of which cause more incidental harm than the intended good. By focusing on disease and on fixing what goes wrong, medicine fails to promote health, which is what goes right. By considering the body a machine, it focusses on external interventions rather than helping the body's amazing abilities to self-repair and maintain itself. The authoritarianism of the medical profession (and the governmental agencies that oversee it) encourages people to put their faith in the third-person pronouncements of experts rather than in their own first-person body awareness. The values of our society tend to override the needs of the body in favor of convenience and mental activity. This trains people to disregard the body's signals and disavow responsibility for its well-being. We expect good health served up to us as a birthright that doesn't require our participation, as easy as taking a pill. Health care has become a professionalized service provided by others, one more industrial commodity, rather than the opportunity and responsibility to provide for oneself.

An overcautious medical profession, wary of negligence lawsuits, may overzealously prescribe treatments that are unnecessary and incidentally harmful. A diagnosis, based on statistics and current models, sets in motion a prescribed path of treatment, regardless of side-effects or

realistic outcomes. I once consulted a specialist about a moderately elevated PSA level.[66] In combination with physical examination and family history, he concluded I had a "40 percent chance of prostate cancer" and recommended a biopsy. I thought the figure was meaningless and chose not to heed this advice. I had read that cancer in the prostate gland is naturally contained and slow-advancing if let alone. I also read that biopsy itself could release malignant cells, if present, into the bloodstream, potentially inducing metastasis to other parts of the body. Furthermore, the specialist did not mention another cancer statistic: that the average life expectancy following common interventions is typically no more than a few years! A negative result of the biopsy (which samples only a few cells) does not rule out malignancy. It may not discourage the surgeon from advising further biopsies and surgery "just to be sure." The logic is to continue probing until a positive result is found, followed by a surgery that may leave the patient impotent and incontinent, not to mention in great discomfort for weeks. In the course of this episode, I consulted with another specialist who seemed eager to operate on me because I had the ideal body type for a new surgical procedure!

That was more than a decade ago; but even then, as a person who had already lived a substantial portion of his life, following such a course made little sense to me. I chose to bet on the other sixty percent in the prognosis, which may have included data drawn from individuals

[66] "Prostate specific antigen"

who had made a point of taking care of their bodies through diet, exercise—and avoiding unnecessary medical interventions! I no longer track PSA levels, a test that has since been discredited. In my opinion, at my present age there is little point in engaging the medical screening process for malignancies, given that I am probably unwilling to submit to the prescribed treatments. Why put my foot on the first rung of a ladder of suffering that will end in death anyway, if a little later rather than sooner? Such a strategy could make sense for a younger person with more years at stake. It might make sense if one believes the diagnosis and wants to buy time for the completion of a project deemed important. Medical advice can give you someone's opinion about where you stand in the dying process. But one should not expect medical treatment for potentially terminal illness to restore a state of health that was taken for granted before the onset of disease! Just as one has to be somebody particular at every moment in life, so one's decline and death must take a particular form. There is no way around that, just as there is no cure for the fundamental uncertainty of life.

Whether or not you choose to follow your doctor's advice, you have the option (indeed, the obligation) to do all within your power to heal your body yourself, and to maintain it well so that it does not break down prematurely. *You* are the agent naturally responsible for that body, which is also your home, your vehicle, and the bed you must lie in. It needs maintenance just as your literal dwelling or car does. Of course, such time-honored metaphors for the relation between mind and body are

already biased. Like the metaphor of the rider and the horse, they suggest that the self is master and owner. I have suggested throughout that the relation is just the opposite: the self exists to serve the needs of the body. The rider is merely the horse's groom. The occupant of the house is no more than its caretaker. Consciousness exists for the care of the house, and only incidentally for the caretaker's amusement. While the mind may conceive itself as substantial and independent of the body, it is actually a bodily function, like digestion or respiration.

Though the mind is not an entity separate from the body, that does not mean it has no needs of its own. (Servants too have needs!) Psychological needs are ultimately grounded in the body. They cannot stray too far from coinciding with the body's needs without endangering it—and thereby endangering the psyche as well. Nevertheless, the relationship is remarkably elastic. One can take pleasure in experiences that are not good for the body. One can also do things for the body's well-being that are not especially enjoyable. Though ill-advised metaphysically, in some ways it is practical to think of one's self as distinct from the body. After all, much of the household is automated. The CEO has time on its hands not dedicated immediately to survival. It is something of a figurehead, with leisure to play golf or whatever, so long as the corporate interests are not neglected or compromised. The self has some liberty to enjoy its position, keeping in mind that the diversity of what can be experienced as enjoyment is nevertheless grounded in the body's needs.

Religion has often taken a stance against the body, in deference to a higher self, which is conceived in the terms of a metaphysics whose priorities are not those of the physical body. In medieval Christianity, the body was routinely tortured to strengthen the resolve of the will to dominate it. What counted was salvation of the soul, not of the flesh. In more secular times, society might take a moral stance against dissipation or deviance, on the grounds that these threaten society. In the present context, however, the concern is with the individual's *own* judgments, as they can be distinguished from the pressures of social or religious conformity.

What pleasures are appropriate to the body's well-being? How should one deal with one's own addictions and excesses, and those of others? A function of self-awareness is to question one's own behavior, in order to better regulate it for the benefit of self and others. In considering such questions, which are always personal, I find it useful to bear in mind the servant's role. The caretaker role includes both the self's fundamental allegiance to the body *and* its relative freedom and proper needs—each in balance with the needs of others and of society. In the luxury of that freedom, one could choose to avoid all inner cross-examination—and thereby the pains of self-doubt and guilt. One could abandon all reflection that might interfere with self-indulgence and thoughtless behavior. At the other extreme, one could adopt a rigid code of behavior that appears irreproachable. But this too is no more than a way to avoid self-questioning. The challenge is to find a middle way in which the needs of

caretaker, body, society and environment can be satisfied in good conscience.

Uncertainty about the future of one's body and mind can be very disconcerting. One doesn't relish thinking about such menaces as Alzheimer's and cancer, yet they remain disturbing background concerns. What would I do if confined to a wheelchair? What would I do if I noticed my mind starting to go? What if I were in unbearable lingering pain? Ideally, I would have an exit plan. I like to think of myself as the sort of person who wants to be in control of his destiny. But I confess I am playing that by ear.

The body can seem a greater embarrassment in death than in life. Someone, after all, has to deal with the corpse. While hospitals are set up for that, they also appropriate whatever control you might have over your exit. You can express your wishes in advance (such as "do not resuscitate"), but it is then someone else's decision how to interpret and whether to respect your wishes when you can no longer assert them yourself. Assisted suicide is now legal in some places, but only subject to formal authorization and supervision by experts. Perhaps the expression, to *commit* suicide, reflects the odd fact that deliberately dying has widely been considered a moral failure, a betrayal of life—indeed, a crime by law. Criminalizing self-murder might make sense in an underpopulated world, though hardly in the present one. No one had a choice over being born; why shouldn't a fully conscious adult have the basic right to choose when to leave life?

Self-murder is really murder of the body. If one could simply *stop living*, as an inner *act of will*, there would be no need to kill the body from without. But the body is programmed to keep going until it no longer can, regardless of one's conscious wishes. Its constitution has no provision that authorizes the CEO to dissolve the corporation. To pre-empt that power, the CEO must betray the corporation by acting upon it from without, in the same way it deals with external objects. This complication is mirrored in the fact that there is no fool-proof and graceful way to exit life by killing the body. If you plan to murder *another* body, your own will likely remains capable of seeing it through. Not so with suicide, whose outcome is uncertain. The enterprise risks failure, which can defeat the purpose not only of putting an end to that existence, but also to the purpose of not being a burden on others. If one's goal is an end to indignity, suicide can backfire. Of course, attempted (an even successful) suicides are sometimes desperate acts of communication—calls for love or help, acts of anger or punishment. But the issue here is not the relationship with others. It is about control over one's own exit from life. Someone once reminded me that all that is required is to stop eating—maybe easier said than done. But I know of no fool-proof, painless, and completely dignified way to stop living. By definition, ending one's life is not a skill that can be practiced.

I do think about death nearly every day, as part of my ongoing personal preparation and a sort of contemplation appropriate to this phase of life. Preparing for death is like preparing for a journey. I have my bags packed, on stand-

by, so to speak. The closer one comes to departure, the more geared-up one may get. A home body at heart, I am always a bit anxious before travel. The difference, in the case of the final voyage, is that one doesn't know the departure date or the destination. The purpose of travel—even the final voyage—is to leave behind one's usual habits and certainties, with openness to something new. I remind myself that I'm *already* on holiday.

There are tangible preparations to make, such as having a will in place. In British Columbia, the provincial health authority provides a legal document to be signed by one's doctor, officially expressing in advance one's wishes for care in the event of being rendered incapable of voicing them oneself. This is a nuanced version of the "Do Not Resuscitate" order.[67] It provides several categories or levels of medical intervention. These range from essentially doing nothing but to make the dying person comfortable at home to doing everything possible to keep the person alive. In one sense, these categories are ranked (inversely) by stage of advance of a terminal illness. In another sense, they are ranked by the considerations appropriate to (decreasing) age. Thus, the form is useful for all ages, not only for the elderly or sick.

Young persons of legal age, with a life ahead of them, will have different priorities from those who have already lived a full life. They will probably want to preserve at any

[67] Also known as an "advance directive" or "living will." The BC official version is called "Medical Orders for Scope of Treatment."

cost their natural opportunity to live out the time that awaits them. But not necessarily. An active young person might not look forward to a life as a paraplegic, for example, let alone in a vegetative state. Accident and disease can happen at any age, which can render one unable to express one's wishes (for example, coma due to an automobile or sporting accident). So, it can be wise even for a younger person to have such an official declaration in place. At the least, it is a great exercise for young or old to contemplate their values and their wishes for emergency or end-of-life treatment. These should be expressed in writing and also discussed with friends and relatives and one's doctors.

In my own case, I have realized that I do not wish to be resuscitated in the event of cardiac arrest or irremediable serious damage to my body or brain. This reflects my age and my belief that death is a natural conclusion to life. I understand that my inevitable demise must eventually take *some* form, which others may choose to call disease. Medical science has not abolished mortality but has changed the ways we die and how long it takes to die. The modern concept of "terminal illness" underlines *illness*, as something from which one might still hope to recover. But lingering illness at end of life is simply a modern way to leave life, since dying people are medically kept alive longer than they would have been in previous eras. The venue of death has shifted from the home to the hospital as the portal through which we enter and exit life. Life expectancy has lengthened as a statistic, but often this

means only that the process of dying has been prolonged—and, in some cases, agonized.

I include here an excerpt from my own "Statement of Beliefs and Values," which I wrote as an official document to have notarized and included in my medical file along with the advance directive form. I provide it merely as an example, which also summarizes the attitudes expressed in this book:

> "I appreciate the precious opportunity to be alive as a conscious being. I therefore treasure my human body for having afforded that opportunity. Similarly, curiosity is important to me. A tangible corollary of both these values is that I would hope to remain as present as possible for the ending of my life, even if it means being in some discomfort or pain. On the other hand, I would not wish to live in chronic extreme agony…
>
> "I believe that ultimate responsibility and final authority concerning one's own health lies with the individual, not with medical or scientific authorities… I object to the collusion of health care with the pharmaceutical industry, and I try to avoid using pharmaceutical drugs. I do believe in the body's natural ability to heal, within limits, and in general I prefer 'alternative' to standard medicine. I wish to avoid hospitalization, preferring… to die at home or in some natural or hospice setting. I wish to decline artificial life support, except when there is an obvious good chance of full recovery.
>
> "I value dignity... It makes sense to me, then, that one has the right, and should have the means, to exit life by choice… I do not fear ceasing to exist, and I wish to meet death with

> intention. I do fear prolonged extreme pain in the course of dying, and also the prospect of losing presence of mind, full consciousness, or control over choice regarding my person. In the case of such eventualities, I believe I would no longer value living and would not wish to be kept alive by others without my fully conscious consent."

What, then, is a good death? Certainly, it would follow most naturally from a good life—however that is to be defined. At the core of the question is self-judgment. What if, on my deathbed, I feel I have wasted my life or conducted myself badly or inadequately?

We are all vulnerable to self-recriminations and doubts. While it is better to confront them earlier in life, when they can be resolved by changes of attitude and behavior, is it too late at death's door to feel good about one's life? No doubt self-forgiveness is related to the religious concept of forgiveness of sin. Pardon by specific individuals against whom one has transgressed can put one's mind at ease. Yet there can remain a residual sense of failure or guilt for transgressions against the gift of one's life, which religion may interpret as moral transgression or as sin against God. On the other hand, according to standard Christian doctrine, one can have led a very evil life and be forgiven by God at the last moment—if only one repents and believes. This suggests that *self*-forgiveness is possible at the eleventh hour even for those who don't believe. The other side of this coin is forgiveness of others—and

forgiveness of life for the hand it has dealt. Forgiving God, in other words.[68]

We have seen that religious faith is one strategy among others to avoid holy terror and anxiety around mortality. The faithful may find peace in their beliefs, and in having at least attempted to lead a good life, provided they are not overcome at last by doubt. For nonbelievers, already overcome by religious doubt, what basis is there for peace? Certainly, family and friends can provide comfort in one's last days, though spending those days in a hospital or institution makes that less feasible. Even in the ideal situation, surrounded by loved ones and not suffering, the dying person remains in a sense alone with their experience. Yet, even if literally alone and feeling isolated, one still has one's own company. One's phenomenality is certainly the companion with whom one has always had the closest intimacy. One definition of a good death is to appreciate the consciousness one has moment to moment, despite all else, for as long as it lasts. Whether or not one belongs to a religious congregation, and whether or not one has close living relatives and friends, one belongs to the community of sentient beings, past and present, and to the human community that heroically strives to self-define. Just by living, we have participated in the human adventure, which includes all that is deemed beautiful and moving.

[68] Cf. Robert Frost: "Forgive, O Lord, my little jokes on thee and I'll forgive Thy great big one on me."

An aim of both religion and science is to transcend the limits of time and space, and the particular in favor of the general. Even at the individual level, that aim requires a different frame of mind than the ordinary one that concerns itself with externalities and daily doing. I have proposed a means to that end: the shift to the subjective frame, where one attends to experience itself instead of the world it is presumed to be about.

Everyday awareness is our guide to steering through the world. It is mostly practical and goal-oriented, to get things done, to get along with others, to make one's way and to help others make their way. As doing recedes from priority with age, another kind of awareness comes into play. Indeed, at any time in life, it is always available as a different relationship to experience. This is the mode I've called appreciation. In the same gesture of standing back to gain perspective, we can appreciate the marvels of human accomplishment as well as the wonders of nature in which we are immersed as physical organisms. Indeed, we can appreciate consciousness itself as part of the Great Mystery. While appreciation may be a special benefit in old age, it is also the natural gift of consciousness to all. For me, then, a good death occurs in the state of grace I call appreciation. Outward circumstances permitting, I hope to be in that generous, relaxed, and loving frame of mind at the moment of my passing. Since I can never know when exactly that will be, my best bet is to try to recall that state of mind every passing moment.

CONCLUSION: The Rise and Fall of Reality

We have seen that the primary job of mind is to construct "reality" and to believe that construction as the truth. This construction is the virtual world I have called phenomenality, which serves to model the external world, including events within the body. Human beings, aware of their subjectivity, are further blessed and cursed with a second mental function: the ability to question and deconstruct appearances and to bracket phenomenality *as* a mental construction. These twin abilities, which have a dialectical relationship, render the nature of experience inherently ambiguous and leave us with a fundamental dilemma: when to earnestly indulge our perceptions and beliefs and when to stand back or apart from them. We are torn between believing and doubting what appears to us in consciousness, including even the doubt. While this quandary reflects our existential freedom, it is a fundamental source of confusion and anxiety. Uncertainty about what is real or true requires us perpetually to choose between credulity and skepticism, between earnestness and sophistication, between engagement and detachment. These contrasting modes or attitudes have been called heroic and ironic.

One sees these modes alternating in the history of cultural developments—for example, in changing styles in art, architecture, and design; but also in social and political history—for example, in the alternation of conservative and liberal political climates. Such cycles are inevitable when one-sidedness calls for redress, for the minority's

time in the limelight, for the counterbalance provided by an opposing force. Cycles are dialectic: thesis, antithesis, then a resulting compromise or synthesis that constitutes a new thesis, beginning the cycle again. If the straightforward perception of reality were alone adequate for human life—taking experience at face value—we would not need to be self-aware nor to be capable of doubting our thoughts and perceptions. But any idea or point of view is limited; every "thesis" is but a partial revelation. There is always a more comprehensive or adequate way of looking at things, which can only be achieved by deconstructing the prevailing view. In the name of progress and wholeness, therefore, we are condemned (and privileged) to a perpetual struggle between faith and doubt.

These two mental functions—of constructing and deconstructing the appearance of reality—are matched by the heroic and ironic attitudes toward experience itself. Though seemingly opposed, the important point is that such polarities are partners in the search for truth. To the believer, the internal voice of skepticism may sound like the tempting voice of the devil. To the skeptic, earnest faith may seem dangerously simple-minded, whose specific tenets may seem laughable. Yet, we are all both believer and skeptic in regard to appearances, sometimes sequentially but often at one and the same time. We are then confounded either by indecision or by the inconsistency of our own behavior. What I wish to affirm is that this is a necessary and unavoidable aspect of being human. Paradoxically, without this inner dividedness one cannot

be whole—or as close to whole as possible for a being that is fundamentally partial, in both senses of the word. The inner dialog between faith and doubt *is* our attempt at wholeness and objectivity. It should not be short-circuited by some attempt to avoid it. But it can seem an endless and irresolvable dispute. It frequently degenerates into outer argument, a shouting match in which neither party respectfully listens to the other, but simply restates their position at every opportunity and refuses to see any value in the other's point of view. Thus, we have wars and civil wars, and the uncivil harangues of parliamentary debate. Thus, also, literal reigns of terror.

This natural dividedness can reach unhealthy proportions within the individual as well as in society. One naturally puts energy behind the perceptions, hopes, and plans in which one has implicit faith. One is naturally deflated when these fail or prove false. The dialectic between self-confidence and self-doubt can manifest as a cycle of mania and depression. The delusional person perceives and believes things that that are at odds with what others consider real. One can see more clearly the dialectical tension between faith and skepticism in pathological cases, when the two mental functions are not working well together. Because that tension exists in all of us, it can manifest in society as a dividedness that threatens to shatter society itself.

On an interpersonal level, one is tempted to adopt a generously heroic stance in regard to one's own ideas and a miserly ironic stance in regard to those of others. That is, one is too often critical of other points of view and not

critical enough of one's own. Both the chronic skeptic and the chronic believer can be guilty of this hypocrisy. It is challenging for either to appreciate the other's style of thought, let alone their claims. The believer is wary of the skeptic's evasiveness, and the skeptic scoffs at what the believer takes for granted as self-evident. Both assert their perspectives in the name of truth. Yet, each needs the twin ability to be sincere and to doubt.

I cannot write from the perspective of religious believers; but I can honor the earnestness of their faith, provided it is not the bad faith that dismisses all other points of view. I may not share the tenets of their faith but I respect the faithfulness itself, because it mirrors the earnestness of my own quest for truth, which my skepticism serves. Similarly, I may not share others' political beliefs, but I can respectfully listen to their arguments. The challenge for skeptics (of whatever brand) is to preserve their earnestness in the face of their intellectual reservations. The challenge for believers (of whatever brand) is to resist overconfidence and loosen their psychological dependency upon dogma. Both challenges require courage and discipline, of different sorts, coming at it from opposite directions. The believer must work through the anxiety for which belief serves as prophylactic or symptomatic relief. The skeptic must overcome the defensive aspect of reluctance, in order to embrace the good faith that lies at its core.

No one is completely free from dogma and no one is entirely sincere. I have attempted to show how individual

and cultural ideas and practices, however worthy in themselves, serve personally and collectively to shield us from fundamental anxieties even as they attempt to access truth. The very nature of the "compromise formation" places us between the extremes of faith and doubt, each of which serves to protect us in its respective ways from being overwhelmed by raw reality. Faith misused is bad faith; doubt misused is a failure of nerve. Skeptics may point to the hypocrisy of some religious adherents or political demagogues as evidence against their claims. But hypocrisy is part of the human condition, from which the cynic is hardly immune. Believers may think that non-believers serve the devil and atheists may think that the faithful are credulous fools. But let those free from error cast the first stone!

As a non-believer critical of religion and wary of politics, I do not expect to convince believers to be more tolerant of infidels. I do hope to convince myself (and perhaps other infidels) to be more understanding of the human condition that is the context of religion and politics. I do not advocate tolerance of dogma and misguided acts in the name of truth (which result actually from *in*tolerance); but I do sympathize with the earnest quest at religion's core and at the heart of democratic institutions.

As self-aware creatures, our fundamental relationship with reality is the relationship of subject to object. While we naturally presume to know the objects of daily experience, the world at large remains a mystery, an unknown (and perhaps unknowable) object. The humanist committed to a

rational perspective must preserve the rigor of vigilant skepticism, but along with it the earnestness and humility that *should* be the kernel of faith for the religious person and the politician. Critical thought has a defensive aspect; it screens information as though it were an assault upon the mind. But the essence of thought and feeling is also creative and proactive; it initiates something from within a holy of holies, in sheer childlike earnest. The believer may tap prematurely into that emotional depth from which the skeptic instinctively recoils with good reason. On the other hand, without that living connection to good faith, the skeptic remains on the dry surface of things.

Belief and doubt are universal. The mind is naturally extremist and overconfident, which naturally elicits doubt in turn. Thus, dissention is rife in all areas of life. There are factions even within science. Humanity has had many conflicting ideas about reality, none of which merits absolute confidence. This is reason enough for tolerance. Our existential situation demands humility and restraint: to be tentative in the face of inadequate data, to adopt the stance of unknowing. Of course, embodied creatures must be able to act decisively on occasion in order to survive; he who hesitates can be lost. Yet, especially for the modern human creature, often enough it pays to hesitate, to be patient.

There will always be conflict in the world, and within ourselves, resulting in anxiety. Conflict is uncomfortable, but can prod one to higher ground. The ability to contain

opposing forces creates an internal pressure that can expand the container. Perhaps that is the engine of change, for better or worse. To be sure, that pressure can be dangerously explosive. It can drive an individual or a society to seek immediate release in action, by galvanizing prematurely behind a singular pole. (One speaks of pent up emotions, blowing off steam, acting out, exploding, etc.) Such release, if controlled, may be a natural process of self-regulation, a protective escape valve.

However, to take sides simply in order to reduce internal tension can lead to tension with others and ill-considered action. It settles nothing concerning what is real or true but can have real consequences nonetheless. To resist the need to reduce inner tension does not exempt one from the need to finally act when circumstance requires. Yet, it can strengthen the mental muscle, so that one is able to tolerate conflicting ideas or cognitive dissonance with less discomfort, long enough to allow a better solution to emerge. Just as friendly discussion gives individuals a chance to come to some resolution, so a patient inner debate can move the anxious individual toward a dialectical synthesis. In particular, it facilitates the emergence of a larger perspective that can accommodate apparently incompatible ideas. That's one good reason to embrace the stance of unknowing: it makes space for that patience that can lead to action that is better considered.

Another good reason is that one can scarcely tolerate others without tolerating conflict and uncertainty within oneself. We are impatient with others who cast doubt on our cherished beliefs, leaving us uncertain and conflicted.

To tolerate uncertainty fosters receptivity, which allows for the growth of mutual understanding. One is generous to oneself by permitting other perspectives a voice, even the mute voice of the unknown. Other people are, after all, valuable pieces to one's own unsolved puzzle. Such inner generosity spills outward, making happier lives and a better world.

POSTSCRIPT: Love in the Time of Coronavirus

The life that nature gives us has always been conditional. One of the conditions for life on earth is that it co-evolved with viruses. The human immune system has been engaged in a perpetual game of one-upmanship with them from the beginning. In spite of the odds, our species has been highly successful, if judged by numbers and the power to transform the surface of a planet. But our very success changes the game. Many of the modern threats of disease are products of our success story. Crowded urban conditions and global travel promote contagion. Famine and poverty erode resistance; so do poor diet and lifestyle even in wealthier countries. The vast animal food industry exposes us to viruses that jump the species barrier, whose permeability reminds us that we are not so separate from the creatures we exploit.

Despite the precariousness of human existence, we live as comfortably and insouciantly as we can, taking daily life for granted when conditions are tolerable long enough to be considered normal. As economies and technologies burgeon, they seem to promise the good life to ever more, even while the rift between the very rich and everyone else widens exponentially. Enter a wake-up call to remind us that we are all part of nature and that every person's existence remains conditional and interdependent.

There is nothing that gets our attention like the possibility of our own suffering and death. It certainly made a big impression on people of the 14th century, when Bubonic Plague wiped out half of Europe's population.

Despite the setback, Europe rebounded in the Renaissance, with a literal rebirth of decimated population and a rededication to the humanist cause. Centuries later, the horrors of smallpox led to the first development of a vaccine, and to the only extinction of a natural viral threat. But that conquest was unique, largely because smallpox is an exclusively human disease with no animal host. It led to the false expectation that contagious diseases in general could be permanently eradicated. Such optimism was unable to prevent the global flu pandemic of 1918, which killed far more people than the bullets and bombs of the Great War.

The present wake-up call should make it clear that pandemics are inevitable in today's world. Like earthquakes, we are overdue for the Big One. So, in a sense, Covid19 is a dressed rehearsal, a social experiment that sets an agenda for future preparedness. We are lucky that this disease is not more virulent and indiscriminate than it is. Like the big predators that once culled the herd, it mainly stalks the feeble with age or those with already compromised health, more than the young and robust in whom our genetic future lies.[69] If the pandemic disrupts human routines, it is more or less business as usual for nature. The mortality rate of Covid19—and its symptoms for most victims—are relatively moderate compared to other plagues in human

[69] In the whole world population, infant deaths from Covid19 represent roughly *zero* percent of known cases. In contrast, among those at the other end of the age spectrum the death rate is above 15% of known cases, but with many of those already suffering from other health problems.

experience, or to the hypothetical pandemic of the 2011 film *Contagion*.

The Covid19 shut-down was not a helpless reaction to mass death and chaos, such as occurred during the devastations of the Black Death. On the contrary, it has been a deliberate, relatively orderly, and largely voluntary effort to protect the most vulnerable in our population. This reflects a central axiom of modern society: to *defer death at any cost*. The commitment to saving life was played out as a strategy to avoid overloading hospitals, which stood as the final defense against fatalities. "Flattening the curve" means keeping the number of critical cases below the capacity of hospitals to deal with them and keeping beds available for other needs. With limited resources, the strategy is to protect the most susceptible. A pandemic is the interaction of a pathogen with a population. On the one hand, the famed exponential curve represents the *contagiousness* of the pathogen; on the other, it represents the *susceptibility* of the population.

As a human ideal, the policy to "leave no one behind" is a fundamental plank in the platform of humanist ethics. It is a value we take for granted as decent and essential to our humanness. In the context of Covid19, it largely means protecting lives that are nearing their end anyway or are precarious because of other health issues. That means, for one thing, that the descendants of an aging generation will foot the bill on their behalf. In coldly pragmatic terms—of how society can manage potential existential threats—it begs the question of the literal costs of delaying mortality.

It raises unsavory questions one would rather not consider and would be unable to answer. These are easy enough to avoid by a policy simply to minimize fatalities. While this policy reflects our humanist ideals, it also reflects the obsession with quantification and convenience in our digital age. It counts a life as a statistic, and gauges success at fighting a pandemic in simple numbers. It offers a goal that everyone can understand and endorse. However, our "most vulnerable" are the canaries in the mine of this civilization. A policy simply to save canaries may obscure the real dangers to our species and our real lack of preparedness for serious threats.

In effect, Covid19 is a trial run that points out the weaknesses of the systems in place. It is the nature of emergencies to deal with foreground challenges and ignore the endemic conditions that make us vulnerable in the first place. These include urbanization, poverty and overcrowding, unhealthy lifestyle, inadequate medical systems, dependence on animal food sources that co-host human diseases, and incursion of human beings into the habitat of other (disease carrying) species. Underlying those problems is exponential growth: of population, GNP, and social disparity. *Those* are the curves that must be flattened if civilization is to survive in the longer term!

Human beings, not viruses, are the primary existential threat to life on this planet. The strategy to delay death at any cost flies in the face of natural controls on population growth, without putting anything in their place. If we are going to value human life in such absolute terms, are we not obliged to create and maintain the conditions in which

it can thrive, in balance with the rest of life? They are two sides of the same coin. If saving life is a moral imperative, then logically so are population control, economic restraint, and social justice.

Clearly, the "life" that is to be saved is intentionally a vague and indiscriminate ideal. We presume all people to have the right to "life, liberty, and the pursuit of happiness" without putting too fine a point on it. It is the *potential* that is to be preserved at any cost—at least for members of homo sapiens—without regard for what that individual life actually is like or how much liberty and happiness are actually involved. While "life" is thus nebulous and abstract, death is easier to measure.

To turn the matter on its head, the modern imperative to preserve life is the flip side of the age-old loathing of death. It reflects our anxieties about dying and the fear of not existing. It may seem downright cold-blooded and heartless to glibly speak of any life as expendable, as a mere statistic, or about the natural role of disease as a human population control. But put the relevant numbers in other contexts: Is war, civil war, or terrorism a population control? Road accidents? Famine? Measles and malaria? These claim many lives annually and are not hazards limited to those already at death's door. Yet, they have not claimed the universal attention or spurred the kind of global cooperation that this pandemic has. However, the suffering from such other causes *is* typically more particular to certain social classes and areas of the world. Malaria is mostly confined to the tropics. Famines do not

occur (so far) in wealthy countries. Well-equipped hi-tech professional armies involve fewer personnel—and therefore fewer casualties—than rag-tag or guerilla armies. Even road fatalities are greater in backward countries. Implicitly, the ideal of life to be preserved is the good life associated with the most developed nations, even as the pursuit of that ideal is ruining the planet. This pandemic has captured the global imagination because it is universally close to home, knocking at the door even of the privileged. For those in North America, Covid19 is the most serious threat to "normality" since the attack on the twin towers in New York.

It is one thing to speak of death as a statistic, or as a biological necessity, but entirely another when it is one's own death at stake, or that of a loved one. The pandemic has brought mortality near and made it personal. Disease has often been a great equalizer in human affairs. While some diseases have been associated with lower classes, the poor, or places far away, others have been more indiscriminate, reminding the privileged that they too are vulnerable. Covid19 is differentially a threat by age and health status; in the developed world, it is a special menace to those in institutions and long-term care facilities. But it is also a special threat to people whose susceptibility is greater because of poverty, overcrowding, homelessness or displacement. It is a global issue, since most people now live densely in cities, and the elderly, the poor, and the homeless are everywhere. While the disease may be rampant in poorer countries, there are epicenters in the

developed world. In many ways, this disease is a *product* of globalization. Thus, it forces us to reconsider the modern way of life we have blithely taken for granted.

That way of life emerged only in the few decades since WW2, a heartbeat out of the millennia of civilization! Our consumer way of life is little more than a transient social experiment; it is hardly a birthright. If we owe the ten thousand years of civilization to a lucky hiatus between ice ages, perhaps we also owe this brief episode we call modernity to a serendipitous holiday from dangerous microbes. Certainly, we owe it to the repository of fossil fuels that is nearing exhaustion. In any case, Covid19 signals an occasion to rethink the meaning of civilization and normality.

What is novel and remarkable about this pandemic is the unprecedented world-wide cooperation of governments, agencies, business, and citizenry in response to a threat that is relatively minor at the species level, if selectively serious at the individual level.[70] More importantly, it poses a threat to our current way of life. The pre-emptive response was to shut down intentionally before growing casualties forced us to. Yet, we knew that this way of life is not sustainable and must be up for review in any case. Despite the warnings of secular prophets, the relentless momentum seems always toward growth and

[70] The global death toll attributed to Covid19 as of the time of this writing (November 2020) is over a million and rising. Yet, this is out of about 50 million cases, a small fraction of the world's population, thus hardly an existential threat to the species.

business as usual. Yet, here we were with business as usual broadly suspended. Apart from its immediate goals, the monumental social experiment involved in the response to the pandemic proves that vast change is possible through cooperation and sheer determination. That in itself is a hopeful sign—provided we follow through.

The superficial challenge is to have the global infrastructure in place to deal with the next big one—to be ahead of the game instead of always on the defense. Yet, the broader scope of the review must include the factors that make us so vulnerable to pandemics in the first place. That broader picture spills out overwhelmingly in every direction, which is one reason for the intense focus on a pathogen we can quantify, track, and attack, even if it is a moving target. The *background* causes of disease, *quality* of life for all, and our *attitudes* toward death itself, are far more elusive to engage. The root challenges are our extreme numbers and dysfunctional behaviors on the planet. Perhaps underlying everything is a human-centric and personal sense of entitlement. Yet, if we are able to muster the current unprecedented public will to combat a mere microbe, can we not apply it to these larger problems, as daunting as they are? With the same determination, can we come up with a global vision, a universal will to steer a future course for humanity with regard to all its existential threats and endemic troubles, in an integrated way? To self-manage on a species level, as self-consciousness helps us to manage on an individual and tribal level? Even to

become wise custodians of the planet? Could that intent set the standard for the new normal?

With centuries of practice we've gotten used to social disparity, to domination by the powerful, and learned to call it democracy or the free market. We've gotten used to reports of starvation and violent conflict and learned to think it normal. Now we're acclimating to the threats of climate change. Business as usual is a game with well-known rules, which makes it easy enough to play. Yet, how to account for the willingness to voluntarily suspend business as usual when other disasters have neither inspired nor compelled it? Perhaps, in part, it is because we are bored of that game anyway? Above all, the present experience demonstrates that we are not bound to its rules.

Therefore, let us not be hasty to resume a normality that bears the seeds of our destruction. At the least, we could instead embrace an annual "business holiday," a season of deliberate shut-down that would significantly reduce our planetary impact. If the strategy is to suffer pain now to avoid more crippling loss in future, we could take that reasoning further. Covid19 stands as a warning, but also as an opportunity to rethink the whole human enterprise.

It also stands as a reminder of the essential ambiguity in all experience. For one thing, it affects those infected very differently, with a wide range of symptoms including none at all. You can carry the disease without ever knowing it. And you can experience a variety of symptoms without knowing whether you have "the" virus. Testing for the virus was first administered to those presenting serious

symptoms, requiring emergency treatment, or to screen the health professionals treating them. This practice skewed the profile of the disease; its ambiguity, combined with lack of adequate testing, left people in chronic doubt about what they were experiencing or the state of their health. Beginning in winter, the pandemic overlapped with the "ordinary" flu season and continued into spring when allergies could manifest similar symptoms.

The *proper* way of tracking the disease was to do massive testing and contact tracing from the outset, as practiced in South Korea, for example. The lesson is clear regarding how to prepare for future pandemics: maximum information must be gathered from day one and made freely and quickly available. My point here, however, is that the peculiar ambiguity of symptoms, combined with the lack of data, resulted in a lot of uncertainty, to which was added the unknown consequences of the global social and political response. No one could know how or whether business as usual would ever resume. This set us up for anxiety. It reminded us that uncertainty, not some presumed normality, is the default human condition.

An epidemic ends naturally when it runs out of potential victims. If it is rational, a strategic response (such as social distancing) would come to an end when the benefit sought (flattening the contagion curve?) becomes outweighed by the social costs of the cure (fear, isolation, chronic shortages, boredom and unrest, unemployment, collapse of the economy, rioting, martial law?). However, the social response is hard to manage since we do not know how long the disease will take to run its course, if ever.

Social distancing and other safety measures can be put in the context of modern society's obsession with security. As a senior citizen I happen to be in the "high risk" age category. Yet I do not necessarily welcome draconian measures initiated for my sake. I accept that I am in the terminal phase of life and that my death must soon enough take some concrete form that could well be unpleasant. If Covid19 was going to be that occasion, then so be it! I have therefore not felt overly concerned for my personal safety, though I rigorously observe the protocols for the sake of the social experiment underway.

I am reclusive by habit, so that social distancing has been no great burden to me personally. Yet, I recognize that social distancing is an enormous challenge for a highly social hominid. No more parties, festivals, theater and stadium events, conventions, or rallies? No more air travel or boat cruises? No more income from tourism? No more romantic trysts in restaurants? No more hugs? No more tango? Indeed, no more *intimacy*? The very word literally means *no fear*. How will people be intimate when they fear physical contact? How will the pandemic reshape sexual attitudes and behaviors?

In the past, human intercourse of all sorts required face to face contact, which is no longer the case. At least technology (cell phones, social media, online conferences, cybersex) had primed us for social distancing. We were already living in a world where "personal devices" replace face-to-face contact and many people were ready to work from home. Many formats for in-person socializing were

shut down in the pandemic, but use of electronic formats compensated. Post-epidemic social arrangements will likely make our civilization all the more dependent on the internet and cell-phone infrastructures. The move to cyberspace reinforces the underlying shift toward mental activity and away from the body. It encourages us to think of ourselves as disembodied, possibly with unfortunate consequences for our health.

On the other hand, I mentioned in an earlier chapter the practice of slowing down to deliberately take in each detail of experience. Staying at home and the general suspension of activity have made that practice seem more natural. The pandemic has enforced a change of pace that I suspect many people welcome, at least as a sort of holiday from the rat race. While it may increase anxiety about health and income, and uncertainty about the future, it also creates conditions that favor relaxation and the attention to experience that I have called appreciation. It has definitely shaken us up, which is the usual requirement for change and for seeing things in a new way—especially through eyes capable of admiring the beauty of it all.

So, what have we learned from Covid19? Certainly, that surprises are always possible. This pandemic reminded us that uncertainty and ambiguity are the default state. The symptoms of the disease are wide-ranging, inconsistent, easily confused with other ailments. The collection of data was often skewed and incomplete, the tests somewhat unreliable. One couldn't know when one might fall ill, how serious it would be, whether one had immunity, how long

immunity might last, or whether one was contagious. This made the future seem unsettled. It opened our eyes to the delusion of taking life for granted.

The absence of a vaccine and the blanket treatment prescribed—to stay at home and take care of yourself—were frank reminders that responsibility for health remains ultimately in our own hands. It made it clear that medical services are limited and fragile. While the cure adopted by society may have seemed worse than the disease, it braced us for possible graver threats. The shut-down gave a noticeable and needed breather to Mother Nature, which could feasibly become regular. This gives impetus to the idea that nature should have legal rights. It gives us pause to rethink our values and restructure society in a more intentional and conscientious way. Emergency measures to support the economic needs of various groups have led to serious discussion of a living wage or guaranteed income.

Above all, Covid19 has awakened us from the slumber of self-absorption and "normality." This could lead to a new conscious human solidarity. Paradoxically, the coronavirus has thrown us together in our isolation. Are we not invited to feel closer to others, interested in their stories, impressed by their intelligence and sympathetic to their experience? Have we not generally become more tolerant and considerate, touched by small gestures and courtesies? In spite of uncertainty and anxiety, have we not grown more appreciative of our own moment to moment experience? The global cooperative response to the pandemic has unified and empowered humanity as never before. Time will tell what we do with that opportunity.

“Let everything happen to you,
Beauty and terror,
Just keep going,
No feeling is final”

—R. M. Rilke