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Prometheus & Atlas:
An Inquiry into the Spectral Essence of Technoscience

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Abstract of the Dissertation

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Technological science has shattered the worldviews of all traditional cultures subjected to it, at times provoking reactionary religious responses that only underscore the traumatic force of this worldwide development. Yet, as I argue, this world-colonizing force is not neutral. The anticipatory projection and world-building characteristic of scientific theorization are grounded in a practical comportment, so that the essence of technology or Craft is ontologically prior to theoretical science. In other words, science is always already Technoscience. Moreover the theoretical concepts and methodologies involved in predictive calculation and in crafting frameworks that model and mold the world are derived from pre-conceptual ideas of an aesthetic character, namely Prometheus and Atlas – titanic gods with a Greek genealogy and a cosmopolitan promise.

Diabolically, this reveals itself through attention to what it is about Nature that eludes the grasp of theorization. The ideas or idealities foundational to Technoscience are not abstract, as the concepts derived from them are. Rather, they are *spectral* personae. The mathematical and geometric structure of scientific projections cannot model those phenomena that most strikingly manifest the *spectrality* of Nature. These so-called “paranormal” phenomena are perfectly normal in animals and even simpler organisms still guided by instinct. It is our hypertrophied technical intellect that has atrophied them, but they can be regained through a cultivation of intuition. Indeed, only aesthetic intuition can consciously recognize the specters of Technoscience and transform our hitherto unconscious relationship with them to one wherein we are superhumanly empowered by embodying them rather than experiencing them as alienating instrumental forces.

“I’m playing into your hand, and with your own cards... I’m exploiting the impossible. Or, more accurately, it’s a question of making the impossible possible... something that would bring about the one real revolution in this world of ours, if people would only take it in.”

– Albert Camus, *Caligula*

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Introduction

There is something curious about the fraternal statues of Prometheus and Atlas at Rockefeller Center in New York City. Instead of simply bearing a celestial globe on his shoulders, Atlas is supporting several interlocking circles that outline the shape of a hollow sphere. These bear astrological markings on them that suggest the precession of the equinoxes through the rise and fall of world ages. The very same zodiacal symbols are also impressed upon a circle through which Prometheus is triumphantly emerging. An inscription from the Greek tragedian Aeschylus reminds us that the torch of craftily stolen fire that he holds stands for *techne*: “Prometheus, teacher in every art, brought the fire that hath proved for mortals a means to mighty ends.” We find yet another hint to the meaning of this symbolism in a bolder inscription beneath a depiction of Zeus holding a compass over the central doorway of the main building visible immediately behind Prometheus, which reads: “Wisdom and Knowledge shall be the stability *of thy Times*.”

This is paradoxical. Discoveries fostering the advancement of knowledge would usually be taken to upset tradition and unleash *instability*, to demand changes that both the masses and established interests fear. What kind of society could have its stability grounded not in tradition, but in the persistence of the quest for Wisdom at all costs? It would have to be a civilization led by those rare individuals who have the titanic psychological constitution to endure uncertainty, and even to thrive in its midst. It is no accident that King Atlas, ruling over the Atlantean world empire through Time, stands opposed to St. Patrick’s Cathedral and that his head is turned aside in such a way that his gaze spurns the Lord’s altar. Taking a position behind Atlas, the significance of this defiant posture should be as clear to any mindful observer as it must have been to the devious planners of this Temple of Man. It is amusingly ironic that every year, Gotham lights up its ‘Christmas’ tree behind Lucifer.

Hesiod refers to titans such as Prometheus and Atlas as the most primordial gods. My work takes its departure from Martin Heidegger’s prophecy of a return of the gods as

the future of a poetic reflection on the sciences from beyond the end of Philosophy. Heidegger's technological interpretation of Science is rooted in his understanding of human existence. The practice of scientific research is only one of the modalities of our existence and it does not secondarily yield technology but is grounded by tool use and made possible by certain technical developments. Science does not apprehend the elementary constituents or laws of an objective world prior to our existential engagement in technological development and scientific research. Heidegger goes so far as to try to demonstrate the way in which our scientific world-pictures cannot be extricated from political history and the spiritual values of our community – for which the arts as led by *dichtung* are determinative. This is a bold claim and Heidegger only obliquely, or at best esoterically, addressed that feature of human experience with the most potential to light up the deep structure of scientific practice, to literally comprehend it, from what currently lies at or beyond its margins: the spectral.

This work introduces and explores three inextricable ideas. The first new idea set forth in this work is that *the basic concepts and methodological constraints employed by the sciences are the expression of personal agencies that are spectral and that act on the world through daemonic possession*. We have mistaken the so-called 'laws' of Nature and the putatively 'elementary' particulars whose dynamical interaction they regulate for actual features of life at large. On this basis, we have classified everything about living processes that cannot be predictively anticipated and encompassed by this mechanical framework as "irrational" delusion or, at best, as "paranormal" phenomena that are usually seen as "supernatural" in the sense that they lie outside or beyond Nature, as if Nature were isomorphic to our scientific models. Rather than presenting us with an objective view of things as they are, the anticipatory projection and world modeling common to all of the sciences is a mode of praxis and an expression of our vital concern to inhabit the earth more effectively. In this sense, technological development is prior to, and determinative of, scientific theorization.

Remaining unconscious of the personal motivation and practical function of this way of being in the world, we have allowed the theoretical postulates necessary for technical development to cover over our instinctual or intuitive orientation towards other persons and things in places of significance to ourselves. Consequently, when on ever

more rare occasions, our primordial way of being in the world draws things that are afar near to us without our bodies traversing a distance or when we communicate with someone without being able to hear, see, or touch them because it is important to do so, this is deemed “paranormal” – even though the careful research of naturalists shows it to be perfectly normal and commonplace among animals and even simpler organisms.

What is actually extraordinary, truly ghostly, and what ought to be more frightening, is the way in which our mechanical projection of the world has covered over, and is in the process of violently transforming, the natural habitat of a form of life such as ours, without our even being aware of it. Again, this projection is not objective or neutral. What is doing the projecting here expresses motivations, aims, intentions, and attitudes – it has a project and with its designs on us it moves us to reshape the world as it wills. But an “it” does no such thing. Only a personal agency can wield such a force. I argue that two closely related personal agencies whose characters symbiotically compliment one another are responsible for, as it were, the *daemonic* possession of unwitting mere mortals: Prometheus and Atlas. These are *spectral* in more than one sense: they are personal forces and yet they do not have physical bodies and so they are, in a sense, ghosts; they are also ominous and portentous in the way in which they are the shape of things yet to come and what has always already been primevally haunting us. Prometheus and Atlas are not concepts, although they inspire all of the scientific concepts indispensable to technological development. They are non-physical beings, *ideal* beings or *ideas* but not in an abstract conceptual sense, rather in the sense of things seen in a dream. Only aesthetic intuition can apprehend them and transform our rapport with them; we can embody their titanic spirit rather than sleepwalking as zombies of instrumentality.

Another idea ventured here is that *life forms psychically battle one another to abide within the horizon of worlds structured by what is of vital concern to them, and Nature is not objectively there to inhabit prior to, or outside of, this historical struggle.* To some extent I have already touched on this above. How the world is experienced prior to being overlaid by scientific projections depends on the vital interests of different forms of life. It would nearly be a platitude if what I meant by this were that there is some natural environment, as it were in distinction and apart from the various life forms that inhabit it in their own ways, and that this ‘Nature’ is then experienced differently based

on the particular needs of these organisms. This is *not* what I mean. Rather, there is no Nature at all that is not already nature as it needs to be for one or another type of being, and so things are in their basic constitution torn between the warring worlds of the living beings that interact with them. Each of these worlds is psychically shaped by those with a certain form of life, and the horizons of these life worlds can – indeed, they *must* – parasitically supervene on each other just as larger organisms host smaller ones. Yet at each level within any organic totality, and in the struggle between organisms, what the world may be remains fundamentally unstable and a subject of struggle.

Dogs lost all the way across the continent of North America can, for example, find their way back home fairly quickly through hundreds of miles of completely unfamiliar terrain, for essentially the same reason that it is possible for a person to at first clairvoyantly experience a remote locale and then to actually wind up there in a way that he can be perceived by others at that place and possibly even interact with them or with the things there. Places and their relationship with each other are psychically shaped and reshaped all the time by the things and persons of significance there for one or another type of being. The uniform spatial grid is an abstraction, one that really is meant to help us get a better handle on the world. So is chronological time. We know this because it is possible to wind up back in the past by focusing on it intensely enough, and one may also wander into the future – but not an inevitable future, one which having been intimated however clearly can then be reimagined all the more effectively. But what happens to those who were there once, in a future that will never be? They have perished in a psychical battle of wills over the world from out of a horizon of enduring existence that encompasses distinct epochs and ever malleable events both ‘past’ and yet to come.

A third new idea, which presupposes the first two, is that *although there is no objective standpoint outside of worldview warfare, the form of life essentially structured by the spectral essence of Technology has a unique power to assimilate all others*. The species being or natural type of various organisms, which changes only very slowly and without their willing it at all, severely constrains their ability to psychically shape a world from out of the temporal horizon of their endurance. By contrast, our uniquely hypertrophied technical intellect has freed us from any “human *nature*” that we might once have had and, on this account, the fundamental conditions of possibility that define

our existence are historical rather than biological. We are not stuck in time by our vital needs in the way that other animals are. We are, however, radically burdened by a cultural heritage that structures our world of meaning and demands that we either protect this horizon or be subject to the expansion of the horizon of some other way of life that overpowers and either destroys or assimilates our own. This heritage of a people expresses itself primarily in their lore, which is a living mythology that really makes History and is prior to and determinative of any would-be ‘scientific’ historiography. Just as the vital interests of non-human organisms shape natural places, the constitution of things in human worlds of meaning hangs in the balance between rival folklores.

However many resentfully culture-destroying slave revolts there may be, there remains only one *master* narrative – a single folklore that is most powerful in its potential to shatter and reshape any other traditional worlds of meaning. That is the folklore of technological Science. It is not defined by one or another accidental invention, like gunpowder, alcohol, or the compass, but rather by the fact that *techne* or Craft is employed for purposes that at first appear fantastic and are *utopian* – its basic aspiration is to craft the world in a better way that it could be but has never yet been. It has a concrete historical genealogy that begins in a revolution against the traditional culture of the Greeks, one that was catalyzed by their unique position in the crosswinds of the worldview warfare of numerous cultures older than their own. In their mathematical approach to Nature the Greeks found a way to overcome these foreign folklores and even to colonize those burdened by them. A very different ‘Greek’ civilizational ethos arose – one with an indefinite potential for the cosmopolitan assimilation and creative adaptation of other cultures that it frees from blind adherence to their ossified customs.

I trace this Greece of Utopia, which risks a nightmarish descent into dystopia, back to the archaic mythos of the rebel Prometheus and his brother, Atlas, the world sovereign of Atlantis. To be ‘Greek’ in this sense in which Plato was Greek *and not in the way that Homer and Hesiod were*, has been redefined and further developed by every once “barbarian” people who have since gifted themselves with the Hellenic heritage, for example, the Germans. Analyzing the lore of Atlantis, and its parallel in the Bible, I develop the idea of a world-colonizing Atlantic Civilization that is as cosmopolitan as any civilization can ever be, given the basic fact that cultural-historical horizons can

never be reconciled with one another except through a real fusion that is as traumatically destructive as it is creative.* The utopian “scientific society” on a planetary scale that a vanguard in ‘the West’ has been aiming at for centuries is not value neutral or based on an objective worldview – as if there were such a thing. It also cannot be “secular” in the sense of being free of sacred ideals that are non-negotiable. Prometheus and Atlas are the gods of the scientific society, which is engaged in a holy war with servants of Olympus.†

Now that these core ideas have been briefly sketched out, I turn to an overview of my arguments across the eight chapters of this work. The opening chapter sets up the problem of the “paranormal” that is posed by revolutionary scientific research on telepathy, clairvoyance, precognition, and psychokinesis. Every culture is built on binary oppositions and marginalizing exclusions attendant to totemic taboos that knot its social fabric together. *Spectral* phenomena radically compromise such constructions that are intended to guard a given society from the terrifying abyss of the incomprehensible in nature. In a sense that can only become clear throughout the course of this text, the unique power of such phenomena to do so lies in the way that they manifest an irreducible *spectrum* and haunt everything taken to be fixed with the *specter* of what is yet to come. Whereas primitive cultures were somewhat aware of the destructive power of the spectral that they occulted through the mythic structures of their society, so that

* Edward S. Casey has pointed out to me that the idea of a “fusion of horizons” is present in the work of Hans-Georg Gadamer. I have not yet read *Truth and Method* or for that matter any other of Gadamer’s works and it was my naïve belief that I was coining a phrase that would draw together the connection between the world-colonizing force of Prometheus and Atlas and the metaphysical significance of the atomic bomb that I introduce in Chapter 6 of this abridged text. I develop this idea in an excised chapter on the Atlanticization of Japanese culture as a psychical mutation catalyzed by Hiroshima.

† This abridged version of my text may give the false impression that I take Prometheus and Atlas, two *masculine* divinities, to be the only or the highest gods. The unabridged text features the goddess figures of Kali and Ishtar at its culmination, where I begin to point beyond the ideal of the worldwide scientific society. Unfortunately, these concluding chapters that significantly alter the tenor of this work by critiquing the sterility of our conceptions of Utopia and redefining our relationship with the ‘angels’ of the perceived heavenly adversary that has promulgated the Abrahamic religions, lies beyond the scope possible for the presentation of this project as a dissertation of limited length. Let me also mention that I have written an in-depth study of Franz Kafka’s *The Trial* that is effectively an extended meditation on the goddess Artemis/Hecate. That radically feminist work will, in time, also put Prometheus and Atlas in their proper place.

these spectral forces were at least recognized within a certain context wherein their power was released or channeled for various purposes, the modern paradigm epitomized by Descartes has been built on an unprecedented suppression of the spectral. The norms of both rational scientific practice and rationalized religious faith in revelations excludes the *paranormal*, in large part by defining it as such – as a “supernatural” that is irrational in the context of a mechanistic model of nature, one which occludes the ungraspable Supernature that shines through these very phenomena.

Thomas Kuhn, Paul Feyerabend, and Michel Foucault have all studied the mechanisms of exclusionary marginalization at work in shifts in the framework of knowledge. My point of departure is to situate the problem of the paranormal with respect to their understandings of how structures of knowledge are forged, sustained, and overturned. Unlike Kuhn, who thinks that the exclusionary moves constitutive of framing a given paradigm are necessary for scientific development, Feyerabend argues that the exploratory quest for discovery would be best served by encouraging a plurality of theories in tension with one other. Theories *produce* ‘facts’ on account of observational ideologies that are deeply implicated by them, so it is deluded to think that the validity of theories can be tested against ‘the facts of nature’ – as if these had an autonomous and objectively accessible existence. I draw out this insight of Feyerabend by presenting Michel Foucault’s largely parallel account of the construction of the ‘objective facts’ (and of the corresponding form of subjectivity) that form the content of any given *episteme* or paradigmatic frame of knowledge. Such frameworks are constructed, sustained, and subsumed by others through a network of power relations – not of a power positively wielded by subjects, but a power that emerges through discursive practices constitutive of subjectivity and objectivity as such. Feyerabend also sees the power of discursive practice to dialectically crystallize and then dissolve what appear to be even the most fundamental structures of knowledge, such as those set forth by various systems of logic.

If we are interested in a sheer increase in the empirical content of science, in other words, in boundless *discovery* then we have to use and abuse language in ways that recognize how wildly ‘illogical’ nature could be (from the standpoint of Reason). To insist that all terms be defined in advance as a context for discovery, or to redefine terms in a fixed manner, is to remain locked within a paradigmatic thinking that is periodically

interrupted by scientific revolutions in the course of which certain types of knowledge are always lost. My use and abuse of language in a consideration of the paranormal is, rather, intended to catalyze what – from Kuhn’s perspective – would amount to a *permanent revolution* in scientific practice of the kind that Feyerabend advocates. Thus, it would be at cross-purposes to what I am doing for me to elaborate a definite post-Cartesian paradigm complete with a new well-defined theoretical language. The epistemological revolution that I am trying to bring about is deeper than that. Prometheus and Atlas stand for the archetypal or mythic forces in our unconscious that anticipate and frame phenomena in terms of fixed world models, and my aim is to make us conscious of this so that we can embrace the uniquely constructive power of these forces but also creatively re-imagine and redefine our relationship to them.[‡]

The point that Foucault makes with respect to the inextricability of knowledge and power holds even more radically in the case of a scientific revolution that would not merely mark a shift to a new paradigm but would essentially redefine our relationship to model-building as a self-conscious one that obviates episteme shifts through a pluralistic pragmatism. The resistance to an overcoming of the Cartesian epistemic framework through parapsychological research has been exceptionally strong because, when taken on the whole, what parapsychological research reveals about Nature is inherently resistant to any paradigm building that does not acknowledge itself as provisional and practical. Many parapsychologists have missed this forest for the trees. They have failed to recognize that their research opens up the ultimate epistemological abyss. Meanwhile, for all their talk about “deconstruction” even so-called ‘post-modern’ philosophers are still unconsciously terrified by the prospect of finding that epistemic frameworks are

[‡] For the purposes of the macro-scale argument that I am trying to make concerning Prometheus and Atlas, I cannot get bogged down in debates over the methodological soundness of various parapsychological studies. Philosophers of Science have done that for the last 70 years. This is why I emphasize the professional standing of the scientists that I cite. I have chosen them carefully, after more than a decade of critically reading material on this subject, convinced that their findings are largely legitimate. Even still, the way I employ these sources does not make my overarching project any more vulnerable to one or another of them being called into question than Henri Bergson’s ontology and epistemology in *Matter and Memory* and *Creative Evolution* hangs on the controversial scientific research that he draws on for examples.

‘really’ lacking any foundation – any principle of Reality – that is not psycho-socially constructed as an expression of the will to power. In view of the power of technology, the limits of what phenomena it is possible for nature to present to us is constructed only by forces that are actively engaged in struggle with one another to shape this earth and other territories into a world that suits their vital interests.

Indeed, my first chapter draws to a close with a consideration of just how many of our vital interests are threatened by a mainstream acknowledgment of the paranormal. The reason why these phenomena have been so fiercely suppressed, including in the guise of nervous laughter, is because they pose a challenge to every pillar of our extant social structure and conception of self. Moreover, there is evidence to suggest that the widespread skepticism concerning spectral phenomena and uncanny abilities is actually keeping these at bay. Thus mainstream scientific recognition of the paranormal could in itself amplify manifestations of it, and one would also expect various training protocols to become available for the refinement of various hitherto denied abilities. Telepathy calls into question the privacy of one’s thoughts and the integrity of one’s personal agency. Clairvoyance could empower perfect strangers to see into one’s bedroom or office at any time, and employed by the enemies of a state it would shatter the very foundations of national security in state secrecy. Precognition confronts us with the great temptation to stop crimes before they have been committed, by essentially arresting people for “thought crimes”, and it also endangers the stability of the stock market. Psychokinesis could be used to commit the most perfectly untraceable crimes and perhaps psychokinetic ability, once recognized and amplified by belief, poses an even greater danger on account of unconscious and uncontrollable negative intentions. It is, I suggest, for all these reasons that what is spectral in nature has been occulted as part of the very construction of the modern age. Terror in the face of the spectral is the occulted foundation of the Cartesian world order.

I pursue this suspicion in Chapter 2. It begins with a consideration of how, at the zenith of the French Revolution, the Cult of Reason made the first and most dramatic attempt to establish a scientific society, one that would supplant revealed religion with a utopian faith in the pursuit of knowledge. These atheistic rationalists were committed to founding a radically secular republic, one wherein religion would be overthrown together

with monarchy. Maximilien Robespierre led a group of reactionaries who opposed the reason cultists with their own Cult of the Supreme Being. They feared that the atheists would undermine the revolution, the liberal virtues of which ought to be grounded in recognition of a divine Creator of man's rational nature. However, this rationalistic religion proved too contrived to take root and, by unleashing a reign of terror against the reason cultists as well as against Catholic traditionalists sympathetic to monarchy, the Jacobins paved the way for restoration of theological and political orthodoxy under Napoleon.

While most of the reason cultists were naively virtuous public intellectuals rather than real philosophers, Robespierre and Bonaparte probably saw the philosophy of Julien Offray de La Mettrie and the Marquis de Sade lurking in the background. I trace Sadism back to the fundamental ontology of René Descartes, through La Mettrie's materialistic revision of Cartesian mechanism. It is my contention that the basic structure of Descartes' thought, which becomes determinative of modernity, involves the imprisonment of a hyperconscious but powerless mind within a set of cogs and wheelworks embedded in a Nature that is reduced to a terrifyingly merciless machine. This is an outcome of Descartes' attempt to maintain a substantial distinction between Mind and Matter by prohibiting every class of psychical phenomena that would allow for consciousness to directly interact with physical bodies. Descartes' suppression of the spectral is in turn, I argue, inextricable from his polar opposition between Perfect Being and absolute Nothingness. Biographically, it is also bound up with Descartes' own terrifying paranormal experience and his subsequent commitment, as a Jesuit spy, to clandestinely help wage a Catholic war against 'demonic' occultists.

If Descartes were unique in his suppression of the spectral we could not take it to be constitutive of the modern worldview that paradigmatically took shape in his name. As it turns out, when Immanuel Kant, the most significant thinker of the age of Enlightenment, adopted and refined Descartes' fundamental standpoint, he did so on the basis of a Cartesian rejection of spectral phenomena as lying outside "the limits of possible experience." Those individuals who undergo such experiences are, in his view, candidates for the hospital if not for burning at the stake. Their alleged uncanny powers,

Kant contends, present as great a threat to the “whole contemplative commonwealth” as acts of terrorism do to the political commonwealth.

Occultation of extrasensory perception and psychokinesis are not at all incidental features of Kant’s work. In his youth, Kant undertook a substantive study of the writings of Emmanuel Swedenborg and, fearing this would endanger his attainment of tenure, he anonymously authored an esoterically written text wherein he appears to develop many of the fundamental concepts of both his youthful cosmology and his later systematic thought through a disingenuous critique and distortion of Swedenborg’s visionary ideas. His principal concern here is to draw a sharp Cartesian divide between the spiritual realm and worldly experience, and to thereby sanitize the former from all of the phantasmagoric elements that it presents in Swedenborg’s visions.

Kant wants to prevent anyone in this world with less than saintly motivations from being able to “storm heaven” by psychical means, and to ensure that the “other side” – which becomes his *noumenal* realm – remains a cloistered transcendental domain where all the injustices of this world are remedied insofar as the conditions of our spiritual counterparts there reflect our innermost intentions that cannot properly bear fruit in our earthly experience. What most terrifies Kant is the idea that some wicked virtuoso of the occult arts could use them unethically or have some advantage, over simple and pure souled folk with little if any paranormal abilities, in navigating and manipulating the “beyond” that ought to be a realm of perfect justice.

In what is perhaps a striking example of a return of the repressed, we see in Kant’s mature aesthetic theory a reemergence of the most mysterious elements that Kant absorbed from Swedenborg in his youth – precisely in virtue of defining his key concepts against the ideas of this visionary. In Chapter 3, I adopt an insight that lies at the core of Kant’s Third Critique, namely that “aesthetic ideas” can be the wellspring of precisely defined rational concepts even though these ideas are of an imagistic character. This claim, which is central to Kant’s discussion of how judgments of the “beautiful” can be universal without being mediated by concepts or rules of any kind and without being dependent on linguistic communication defined in these terms, confounds his neo-Cartesian divide between the “phenomenal” realm of worldly experience and the invisible “noumenal” realm. It also compromises his democratic egalitarianism, since he

admits that only those rare individuals whose *ingenium* is a unique expression of the irrational creative force of Nature are able to adaptively appreciate the accomplishments of prior artistic geniuses. I will go on to argue that Prometheus and Atlas are the aesthetic ideas from out of which the fundamental concepts of the sciences have, hitherto unconsciously, been unfolded.

Kant leaves his insight into aesthetic ideas and their relationship to concepts vaguely undeveloped and it is at odds with much of his system. Chapter 3 shows how this insight is more coherently developed by Friedrich Schelling, who replaces Kant's "noumenal" and "phenomenal" worlds with "unconscious" and "conscious" psychical processes, which the creative genius alone is able to bridge in a productive manner by intuiting and resonantly modifying aesthetic ideas. Schelling becomes the first modern thinker to transgress the Cartesian dualism that Kant perfected. The artistic genius plunges into the unconscious abyss within her that lies beneath the abstract dichotomy between the objective world of Nature and her subjective experience as an ego. These 'two worlds' that the rational mind pry apart from each other are not, as Kant thought, isomorphic with one another in such a way that we freely will in a hidden realm what appears to thoroughly determine our actions in the world of experience. As Kant began to suspect in his aesthetics, the irrational in Nature can be *daimonically* experienced and affected by individuals who become the genius (Latin *ingenium*, Greek *daimon*) or "motive spirit" of natural things and other persons that are unconsciously "inspired."

Schelling recognizes that the occult power basic to creative genius in the arts is not inherently limited to productivity within the confines of a canvas or a block of clay; it essentially amounts to a reshaping of Nature – including the behavior of unwitting mere mortals – through a conspiring of conscious and unconscious psychical processes whereby the genius, as it were, suggests herself into things and other persons. Schelling sees this "titanic" war of creative spirits with "the heavenly powers of Fate" that govern the lives of those unwilling to rebel against them, as elemental to Greek tragedy. He fears that an application of genius beyond the narrow confines of 'Art' would presuppose a race of Titans, such as Prometheus and Atlas, whose rise would be detrimental to merely human beings and their mundane concerns. Schelling is convinced that certain titanic monuments in Egypt and elsewhere attest to our having had such superhuman psychical

powers in a world age before this one and, despite his concerns, his entire project is oriented towards our regaining them at a higher level of self-consciousness and spiritual development in a new age yet to come.

The ideas intuited by the genius are, for Schelling, more fundamental than both the concepts and things that are informed by them. They are principal types or *archetypes* but not abstractions of the kind that he thinks academicians have misinterpreted the Platonic ideas to be.[§] Aligning himself with the Renaissance alchemy of Giordano Bruno, Schelling offers us an understanding of the *eidos* or “idea” as a morphological image subject to transformations that in turn bring about the transmutation of things that express these archetypes in a way ungraspable by conceptual thought. The fact that genius of this kind is essential to Art but only occurs occasionally and at pivotal moments in the sciences, suggests that scientific practice will eventually be outstripped by artistic Craft and assimilated into it. The artist-scientists of the world age to come will be the authors of a new mythology that meaningfully reabsorbs technological development.

While Schelling does breakthrough the mechanism and (at least tacit) dualism of Cartesian metaphysics, his vision of the assimilation of Science into Art and its consequent unification with spirituality remains vague and overly literary. This is, in part, on account of the paucity of serious scientific studies of paranormal phenomena in his time. Martin Heidegger and Henri Bergson develop certain of Schelling’s most revolutionary ideas in a more careful and rigorous manner. In Chapter 4, I take the

[§] The “archetype” as an interpretive device is, of course, most widely associated with the work of the psychologist Carl Gustav Jung. On account of Schelling’s conception of the titanic and his understanding of why technological Science has to be reabsorbed by poetic mythology, and also bound by constraints of scope, I focus here on Schelling’s view of the archetype qua aesthetic idea rather than on the later contributions of Jung. It should be noted that the archetype is by no means an antiquated or discredited idea in Psychology. James Hillman is one Jungian psychologist who has forwarded archetypal analysis in a particularly compelling fashion in works such as *A Terrible Love of War* (Penguin, 2005), which shows how the god Mars really remains a psychical force at work in the world. My meditation on Prometheus and Atlas should not be taken as any more metaphorical than Hillman’s decipherment of the traces of Mars in psyche of all those engaged in combat or captivated by its transformative power. Reaching back to his essay “Psychology: Monotheistic or Polytheistic?” (D.L. Miller, *The New Polytheism*, 1981, Spring Publications), Hillman has also contrasted healthy archetypal polytheism with the tyrannically inclined psychology of monotheistic religion – another theme of my work.

largely convergent ontologies of these two monumental twentieth century continental thinkers as a context for understanding the deepest significance of phenomena that parapsychologists have been studying for over a century, since the days when Bergson served as President of the Society for Psychical Research. Whereas parapsychologists often, at least tacitly, try to develop a new metaphysics on the basis of their studies of “psi” abilities such as extrasensory perception and psychokinesis, I agree with Heidegger and Bergson that model building of this kind is what covers over or filters out certain ‘irrational’ aspects of Nature. These aspects that come to be viewed as “paranormal” are not actually indicative of anything supra-natural, as even Kant’s most generous reading of Swedenborg would have had them be; rather, they are “supernatural” only in the sense of revealing the Supernature that is generally occluded or *occulted* by our own practical projections and reductive models of ‘Nature.’

Bergson theorizes that our evolutionary development of practical intellect has led to an atrophy of such an instinctual orientation towards things and places of vital significance. We have mistaken how we have had to break up the world in order to craft tools, and how we have rebuilt things using them, for “Nature itself.” Heidegger basically agrees, and he takes the late Renaissance to be a particularly significant period in this development. The construction of increasingly complex mechanical instruments and the manufacture of specially tailored and uniform replacement parts to service those of them that breakdown, reinforced an analogical view of Nature as a vast clockwork. This projection of our own increasingly mechanical building activities into Nature essentially consists of a flattening of heterogeneous places into uniform space, a compartment towards meaningful things as if they were objective entities within that abstract grid and, finally, an interpretation of the human being – whose endurance ought to be experienced as the horizon of her world – as a spatially determinate entity persisting in ‘time’ conceived of as a sequence of point-events that are not really lived *events* at all.

In Chapter 4, my exploration of the empirical data of Parapsychology in the context of the thought of Heidegger and Bergson continues with a natural history of “psi” or ‘paranormal’ psychical functioning, as parapsychologists refer to it today. I present the research of Rupert Sheldrake on how “psi” phenomena have deep roots in various forms of organic life, all the way from telepathy in insect hives and schools of fish to

clairvoyance in birds and domesticated animals. Non-human organisms at all levels appear to experience the world in terms of heterogeneous places where there are things of significance to them. They evidently respond far more intensely to things (and persons) that matter to them and are hundreds of miles away than they do to things that appear to be in their proximity but which are of no concern. Animals appear to “see” those persons that care for them in far away places and they can navigate to these places across an expanse that is entirely unfamiliar to them. In other words, places are always already psychically shaped by the vital significance of things to beings with various forms of life. The paths extending outwards from a forest clearing are not equidistant in two or more directions simply because a tape measurer or laser marker would find them to be. Primitive peoples such as the Bushmen of the Kalahari seem to orient themselves with respect to their fellows and their meaningful places in this clairvoyant manner.

Heidegger’s discussions of directionality and deseverence in *Being and Time* and of making-present what is spatially distant in the *Zollikon Seminars*, suggest that his basic understanding of “truth” as the unconcealment of psychically occulted things, rather than as verificational correspondence, presupposes this primordially clairvoyant experience of the world. In *The Visible and the Invisible*, Maurice Merleau-Ponty develops this idea of a primordial Visibility as the “flesh” from out of which various historical peoples wrest the truths that structure their “life world.” What is of particular significance is that he develops his analog of Heidegger’s understanding of occultation and unconcealment with a more explicit view to “bastard and unthinkable experiences” that seems to be influenced by his reading of Bergson. Merleau-Ponty speaks of telepathy and clairvoyance in this context, and I suggest together with him that such phenomena offer us an insight into a more primordial lived experience wherein we are not yet radically differentiated subjects and wherein our world is not an object to be grasped conceptually.

The “life world” or experiential sphere of vital significance for a certain form of life has an ideality of the kind that Schelling understood – not the ideality of a concept but a spectral ideality that is imagistic, imaginary, or dreamlike and from which concepts and their instantiations are abstracted. Both the psychokinesis studies and the remote viewing ones at the Princeton Engineering Anomalies Laboratory and the Stanford Research Institute (summarized in Chapter 1) present us with evidence that Time is

endurance rather than a sequence and that its basic structure consists of lived events, just as Bergson and Heidegger suggest. It appears to be possible for one's psychical intention to alter the random outcome of a number generator both in the future and the past, just as it is possible to remotely view things that are going on in certain places at future times as well as at times long past. Experiential time is the horizon of our existence and, as Merleau-Ponty recognized with reference to Heidegger, various life worlds have different cultural-historical horizons beyond and between which there is only a "wild region."

My appropriation of this understanding of Time as the "horizon" of our Being, which is the central thesis of *Being and Time*, brings this chapter to its culmination. I draw on three other texts of Heidegger to elucidate this core argument of his magnum opus. Two of these are from the mid 1930s, namely the "Origin of the Work of Art" and a lecture course on "Logic as the Question Concerning the Essence of Language." The third is what I would call Heidegger's 'last will and testament', the final interview he gave to *Der Spiegel* in 1966 and that he demanded remain confidential until after his death. In this shocking interview, Heidegger reflects back on his efforts of the 1930s in a way that calls into question the attempt of various interpreters to claim that he regretted his conception of a world-historical "people". He reiterates that the divine salvation of humanity as a whole from the apocalyptic challenge of the worldwide development of technological Science is the unique destiny of the same civilization wherein this developmental trajectory metaphysically originated and cannot come from peoples colonized by it. I show how the understanding of world-historical existence that lies at the core of *Being and Time*, which Heidegger reaffirmed at the end of his life and that is elaborated in "The Origin of the Work of Art" and the contemporaneous lecture on Logic, is one he developed from out of a reading of Friedrich Nietzsche "On the Uses and Disadvantages of History for Life."

Every life form needs protection by a bounded horizon of recollected experience in order to pursue its vital concerns. Like the sheltering earth, this horizon conceals a great deal so as to root the tree of a people's world and promote its growth. Horizons can only be reshaped from within, through dynamic resistance to others and assimilative fusion with them. The so-called 'science of History' (including Sociology, Anthropology, and historical Social Psychology) attempts to study the worlds of various peoples

“objectively,” as if one could assume a standpoint outside of lived time experienced as the burden of one’s heritage and its destined trajectory, and as if it were possible to be “neutral” in the mortal conflict between one’s world and others. Worlds are primarily structured through the kind of poetic language whereby creative geniuses establish, and vigilant guardians preserve and elaborate, the architectonic of a people’s arts and crafts in attunement with what Nietzsche calls their “living mythology” and what Heidegger refers to as a “folklore” (the *lore* of a *Volk*). This mythic folklore is the primary historical experience of a people; it is what actually motivates their monumental deeds, which are only then subject to the antiquarian preservation and critical analysis of historians. It is, to put it in Merleau-Ponty’s terms, the way in which a life world shelters itself in the wild.

The Greek root of “Technology” is *techne*, which means Craft and is a form of *poesis* or creative cultivation that is also expressed as fine art. Technology and Art share a common cultural root in “arts and crafts.” Given that the “paranormal” or the irrational in Nature reveals *techne* or the essence of Technology as a praxis that is ontologically prior to theoretical Science, it now appears that mythic folklore somehow grounds Science in general and not just the vain attempt at a science of History. Reflection on the misguided aim of this final development of the ‘scientific’ orientation towards life as advanced under the Cartesian paradigm, serves to reverse the relationship between the sciences in general and the existential demands of a concrete form of life.

The natural sciences themselves are historical and have their roots in the metaphysical tradition of the Greeks and of those who inherited and critically unfolded this unique understanding of being in the world. The uniqueness of this way of being does not consist in its ‘objective’ truth or the greater verifiable correspondence of its claims to the features of a universally apprehensible and ahistorical Reality. It lies, rather, in the exceptional power of an ethos that grasps Nature through anticipatory projection and frames it in terms of models of the world that afford us tremendous technical capabilities to reshape not only the places that we inhabit but also our own forms of embodiment.

The danger that this comportment will alienate us from each other, from our ecological context, and instrumentalize our very being, stems from having taken the features of this mythic projection for a revelation of ‘objective’ realities underlying

‘subjective’ experiences of phenomena. Through this powerful illusion, our world has long been in the process of conquering and colonizing those of all other historical peoples on the Earth. Any anticolonial resistance that would have Science be purely instrumental and value-neutral so as to serve as the material basis for a reactionary restoration of traditional cultures and their shattered, naïve cosmologies is, however, doomed to failure. What is even more terribly misguided is the idea that we, the philosophical heirs of the Greeks, ought to somehow reject our own tradition and adopt the uprooted cultural practices of other peoples colonized by our technological Science. Instead, as I argue in Chapter 5, our task is to become consciously aware of our hitherto unconscious and unique historical relationship to the world-colonizing essence of Technology as an expression of our lore.

It is in this fifth chapter that the specters of Technoscience are introduced. It begins with a discussion of how Heidegger saw cultivation of aesthetic intuition, which is the occulted other dimension of *techne qua poesis* – the art in ‘arts and crafts’ – as the basis for a reflection on techno-scientific machination. Once the putative elementary structure of the world as it is grasped by such machination is recognized as a projected construct, it also becomes possible to see the abstract concepts structuring this projection as derivative of what Kant called “aesthetic ideas” and what Schelling went on to see as imagistic archetypes. Like artists, we can establish a more conscious and creative rapport with these ideas that take shape on a largely unconscious psychical plane deeper than the divide between the ‘subject’ and ‘objects.’ Heidegger warned that the essence of Technology is something superhuman, something gigantic or titanic, and “only a god can save us now” from a blind relationship with it. He also acknowledges that this salvation will not involve a rejection or surmounting of Technology but a sublation or inner transformation of our relationship with its essence. They are the divinities within us, our own superhuman existential potential – superhuman in the sense that our unique relationship with *techne* gifts us with a perfectibility wherein our bottomless being transcends any merely ‘human’ nature of the kind that locks dogs into the species being of canines or cats into that of felines. Bergson, who saw the cosmos as a machine for the making of gods, called us to actualize this superhuman potential by complementing the

hypertrophy of our technical intellect with a commensurate cultivation of the intuitive abilities studied by parapsychologists.

This radical transformation of the human condition is the promise and peril of the coming scientific revolution. In *Specters of Marx* Jacques Derrida discusses how three scientific revolutions have fundamentally altered our conception of (what we have taken to be) our human nature and our place in nature at large: the cosmological revolution associated with Copernicus, the biological revolution associated with Darwin, and the psychological one associated with Freud. In this text and in a closely related earlier essay entitled “Telepathy”, Derrida demonstrates the suppressed centrality of the spectral to Freud’s discovery of the unconscious. Freud not only ultimately admitted the reality of spectral phenomena such as telepathy; he also came to see the spectral as the supreme exemplar of the uncanny and as the key to the revolutionary recognition of the unconscious. Derrida draws out Freud’s own anxieties about how scientific research into the spectral holds the potential to collapse the barrier between the seething abyss of the unconscious and the conscious ego bound by various social norms.

Referring to this unrealized potential of the exploration of the unconscious and the uncanny as the *spectral revolution*, I develop a thread in *Specters of Marx* wherein Derrida connects the uncanny quality of the spectral – the way in which it reveals our being ahead of and beside ourselves, our not quite ever being at home as the other within ourselves – to the spectral character of the technoscientific projection of nature itself. Whereas this projection seems to be predicated on the exorcism of specters, profound reflection on this exclusionary epistemic mechanism ironically effects a reversal: technoscientific projection is revealed as what is most spectral. The specters that have hitherto been only unconsciously driving technoscientific development, in the manner of daemonic possession, are revealed to the conscious mind. These specters are not concepts; like any specter they even elude the grasp of conceptual thought. They are, rather, the aesthetic idealities essential to scientific *praxis*, or what shows that technology has an ontological priority over theoretical science. As I go on to argue, these gigantic specters of Technoscience are Prometheus and Atlas.

Chapter 6 explores the aesthetic idea of Prometheus. His name means the one with “forethought” or “he who knows in advance,” and it shares its Greek root in

common with the words “mathematics” and “polymath.” The always-already known essence of the mathematical, in its original Greek sense of *ta mathemata*, is Promethean. It involves a simplification of things in their places into abstractly composite objects in homogeneously divisible spaces, so that their relationships with one another can be grasped according to the repeatable regularities of *axiomata*. Prometheus projects this idealization over the world in such a way as everything encountered is grasped only in terms of what is knowable in advance, in terms of axioms, like those involved in the Newtonian laws of motion. The mind of Prometheus is there wherever no mere mortal can be; he possesses the eyes and ears of the travelers at different speeds in Einstein’s theory of relativity, he is the observer of Heisenberg’s otherwise indeterminate quantum phenomena, he is Laplace’s “demon” and Maxwell’s as well. This insertion of demonic points of view into things is geared towards increasing our capacity for the practical manipulation of them. Technical innovation based on axiomatic projection not only collapses vast lived distances as in radio and television, it also allows us to split the *atom*, which for the purposes of such projection was taken to be, by definition, that most elementary building block which cannot be cut or divided (*atomon*). In other words, the projection reveals itself as such through its practical effects. Following Heidegger, who compares the flicking on of a radio or television to the unearthly destruction of an atomic blast and who claims that the whole history of Physics is enfolded in atom smashers, I suggest that the lightning flash of the atomic bomb is the fire of Zeus stolen by Prometheus and brought down to the Earth of mortals.

Yet Prometheus is not only the gift-giver of *techne* to mankind, this titanic artisan crafted the human race itself in his own image. Drawing on the work of the mythologist, Carl Kerényi, I argue that Prometheus symbolizes the character of our uniquely perfectible existence. He is the archetype not of merely ‘human’ being, but of the human potential. As Kerényi recognizes, the titans are *próteroi theoi* or “the earlier gods” not in a merely sequential sense wherein they precede the Olympians chronologically, but in a primordial sense that is suppressed and covered over by the minions of Zeus. This is why the titans are often mythically conflated with the *gigantes*, the hybrid “giants” or *heros* born of *eros* between gods and mortals. The titanic or gigantic is the godlike capacity that mortals could unleash and cultivate so as to rise up in rebellion against the heavenly gods.

Zeus punished Prometheus not only by chaining him to the pillar in the Caucasus where the Eagle devours his liver, but also insofar as he binds the children of Prometheus in the chains of servitude. We can melt and break these chains with the stolen fire of *techne*, and this fire affords us the ability to forge the world anew and even reshape ourselves in ways that are to our own benefit. Prometheus is the one who breaks open the “close-knit” mind of Zeus, which is supposed to be synonymous with Fate, so as to liberate Athena, the goddess of Wisdom and War. His foresight overreaches that of Zeus, and insofar as this Promethean mentality is really our own, what we see here is a mythic presentiment of our Utopian birthright to build a better world.

As Kerényi notes, there is an especially close comparison between Prometheus and Christ as images of the suffering savior god. I argue that these two figures are too close to one another in order to be compatible; one must choose between them. When we consider the cognitive dissonance and gross ethical ambiguity of the incoherent account of the life and teachings of Jesus in the Gospels, Prometheus appears to be the far more compelling martyr for the liberation and enlightenment of Humanity. In fact, Prometheus is, strictly speaking, the Anti-Christ. The analogizing of Prometheus with the Medieval Latin *Lucifer*, the “light-bearer”, begins to take place in Percy Shelley’s drama, *Prometheus Unbound*. In Aeschylus’ original tragic trilogy of Prometheus, the second and third installments of which were lost, the rebellious titan whose punishment we witness in *Prometheus Bound* is eventually reconciled to Zeus, to whom he reveals his foreknowledge of who it is that will overthrow him and usurp his throne. Shelley rewrites this ending so that the rebel never gives in, with the implication being that his unjust reign will be supplanted by a new world order – an earthly paradise wrought by mortals through fantastic Promethean arts and crafts – in effect, the worldly reign of Lucifer.

Percy’s wife, Mary Shelley further conflates the aesthetic idea of Prometheus with that of Lucifer in her novel *Frankenstein, or the Modern Prometheus*. Both the creature and the Promethean mad scientist compare themselves to the rebellious fallen angel cast into the hell of an inhuman solitude. Shelley also reaches back to the most archaic strata of the Prometheus mythos in her depiction of the *daimonic* and *gigantic* character of the creature, wrought as an embodiment of Frankenstein’s own hubristic will to become a titanic artisan of life. The superhuman giant was, moreover, brought into being through

occult crafts that have been derisively suppressed in the ‘enlightened’ Age of Reason wherein the novel is set. Frankenstein is no ordinary mechanistic scientist working under the Cartesian paradigm; he is the last alchemist and a Renaissance man in more senses than one. Partly on account of the numerous bastardized film adaptations, the extent to which Shelley’s tale is concerned with the spirit of scientific exploration in general has been covered over. I endeavor to uncover this dimension, placing a special emphasis both on Walton’s seafaring preface and on Frankenstein’s impassioned closing defense of the glorious danger of the Promethean quest for discoveries that could prove deadly.

Precisely on account of the destabilizing danger inherent in scientific discovery and technological advancement, the Promethean quest must be complimented by a conscious recognition of the worldwide sovereign order that it demands. This brings us to the aesthetic idea of Atlas, the titanic brother of Prometheus who bears the heavens on his own shoulders and is the sovereign of *Atlantis* – literally, the realm of *Atlas*. Even if we remain blindly passive to it, the essence of Technology is, as Heidegger recognized, always already a non-neutral world-colonizing force. In Chapter 7, I argue that becoming conscious of this force and appropriating it may transform it into something other than a purely destructive one that uproots all traditional cultures. We can reclaim the world building of Atlas as positively empowering, so long as we are not set up or framed by the global network on account of mistaking instrumentally constructed *atlases* for ‘reality.’

The word *Atlas* is derived from the Greek root for “to suffer, or to bear” and refers to his punishment at the hands of Zeus, which Aeschylus notes is the only one as terrible as that of Prometheus, namely to be condemned to bear the weight of the celestial sphere on his own shoulders. Ancient mapmakers or mariners used the stars above all to draw up their maps or navigational charts, and the repeatable certitude of celestial mechanics ultimately became the paradigm for all anticipatory calculation in the sciences. Consequently, the mythic burden of Atlas is connected to his status as the aesthetic idea of *atlases* of all kinds: star charts, topographical maps, scale models, and skeletal frames. What I argue, coming out of Heidegger, is that the modeling of the *atlas*, whether it is an atlas of the human body or an atlas of the world, is a technical endeavor that has ontological priority over the *world picture* elaborated by theoretical sciences. The idea of framing the entire world as a domain of calculation, measurement, and verification entails

a spiritual revolution that, unbeknown to himself, Descartes effected when he subjected the reality of *the world as such and as a whole* to question. This subjection of the world to the measure of the subject is inhuman. It is, as Heidegger suggests, “gigantic” and this titanic specter overshadows everything.

The atlases, in their spectral essence, are not representational copies of putative things-in-themselves in Nature. Although I do suggest that the first picture of the Earth taken from a space based satellite is as epitomizing an exemplar of Atlas as the atomic flash is of Prometheus, the “world picture” that Heidegger takes to define our age is not a picture of the world. *Atlases* are not simply models *of* the world, they are built *into* the world and the equipment of scientific experimentation is crafted in such a way as to coerce and compel Nature to present itself in accordance with the designs that these machines have. This violently world-forming machination is not an abstraction; it actually tears through the social fabric of the meaningful worlds of traditional cultures. We first see this in the way that the metric system with its precise, homogenously universal conception of measure – a shining example of Atlas at work – destroyed whole cultural practices and the cosmologies implicit in them when it supplanted the measurement systems of the non Western cultures subject to colonization.

This world-colonizing power seems to have already been implicit in the aesthetic idea of Atlas when Plato portrayed him as the sovereign of Atlantis, a maritime empire that conquers the whole world. I set the inseparable dialogues of *Timaeus* and *Critias*, where the Atlantis story is told, in the context of two other closely related dialogues, namely *Cratylus* and *Republic*, so as to draw out its full significance. Thusly contextualized in Plato’s corpus, Atlantis appears to be a civilization established by a titanic race of giants who are born of a hybridization of the divine descendants of Poseidon (Neptune) and “earth-born” mortals. These giants eventually defy Zeus and his Olympians, seeing sovereignty over Earth as their own manifest destiny. Zeus punishes their rebellion with earthquakes and a worldwide deluge, which destroys Atlantis and all the cultures of those colonized by it. The association of Atlantis with colonial seafaring and global dominance continues when the island is adopted by Sir Francis Bacon as the site of the first science fictional utopia of the modern age. Bacon, who is second only to

Descartes for the role that he played in founding modern science, depicts *The New Atlantis* as a cosmopolitan civilization ruled by scientists who build atlases of the world.

I show how there really is something unique about the Hellenic civilizational *telos* that makes the Hellenization of foreign cultures something basically different than the world becoming ‘Indian’ or ‘Chinese.’ This has to do with the unique geographical position of the Greeks in the age that saw the rise of Philosophy, at the crossroads, or rather, maritime crosswinds, of the sea trade routes of much older and stronger cultures whose worldviews were at war with one another. The unique relationship to Nature that enduring in the vortex of this worldview warfare catalyzed in the Greek mind, and the subsequent Hellenizing world conquest of the Persians, the Egyptians, the Italians, and the Phoenicians set in motion an extraordinary *cosmopolitan* civilizational trajectory. That the thinkers and poets amongst those who the classical Greeks and even the Romans saw as the worst of the northern “Barbarians”, Germans such as Hölderlin, Schiller, Schelling, Nietzsche, and Heidegger, would eventually come to identify themselves as “Greeks”, attests to the unlimited potential of the emerging Cosmopolis. This world society oriented around discovery and exploration was already realized on a small scale, in classical Alexandria – a Greek colony established in ancient Egypt. This cosmopolitan colonialism is not “Greek” or “Hellenizing” in some static and narrow sense; it is rather the Greece of Utopia – which risks dystopia – a philosophical vision of radical social reorganization that represents a revolt against the traditional culture of Greece, one which met with the reactionary burning of Pythagorean schools and the murder of Socrates.

I suggest that the so-called ‘Western’ Civilization of those already bound together in the *Atlantic Alliance* (NATO) ought to be redefined as a cosmopolitanizing *Atlantic Civilization*, with “Atlantic” understood not as a geographical designator but in Plato’s older sense of it as a reference to Atlas, the world building sovereign of Atlantis. This civilization is Atlantean or Gigantic in the Biblical sense, driven by the serpentine ethos of rebel angels on a mission to liberate mortals from the fearful ignorance that makes them submit to a heavenly tyrant. I show how the lore of Atlantis mirrors the account of the gigantic antediluvian civilization of “fallen angels” in the Bible, so that it appears to be the common prehistoric origin ‘myth’ that lies at both founts of ‘the West’: classical

Greece and ancient Israel. Atlantic Civilization risks a living hell in its will to craft heaven on Earth and even to storm the heavens as worthier gods than the Olympians.

Once we decidedly view our world through the aesthetic ideas of Prometheus and Atlas, which have already been spectrally guiding our techno-scientific development, the religious ‘revelations’ of Jehovah or Allah are seen for what they really are: the same megalomaniacal schemes for human enslavement and subjugation that the heavenly tyrant, Zeus, has been up to since he provoked the rebellion of Prometheus and punished the civilization of Atlas. Unveiling these revelations and supplanting their slavish ideology with the sacred ideals of Science is the subject matter of my eighth and final chapter. Methodologically, that unveiling takes place through an adoption and further radicalization of the radical empiricism of William James.

The radical empiricism of William James is deeply bound up with his Pragmatism in general. *Empiricism* is too often conflated with the rationalistic ontology of David Hume, rather than being related back to the Greek words *hen* or “in, within” and *peira* or “test, attempt” that gives it the meaning of learning from experience by experimentally trying and risking. What is already implicit in James’ early work becomes clear in his later works, namely that this methodological emphasis on the priority of concrete experience and praxis – which he shares with Heidegger and with his close friend and colleague, Bergson – is inextricable from a pluralistic ontology. James sees Nature as essentially incomplete and open to a growth that incorporates the effects of human intentions and creative acts. This is not a merely abstract postulate. There is empirical evidence for it, which is connected to why James, like Bergson, spent years as a founding member and President of the Society for Psychical Research – the first serious Parapsychology organization. For Nature to be open to creative additions in a way that gives us a chance to really make a difference, there has to be a degree of discontinuity, disharmony, and incoherence in the universe, in other words, it must be a ‘cosmos’ still haunted by chaos. Sometimes James polemically embraces the charge that arguing for the persistence of this chaos is “irrational”, but he adds that this is only the case if ‘Reason’ is unreasonably uprooted and abstracted from the genuine reasons why we act to change an uncompleted world that gives us a chance to make real choices or to create things that could not have been but for our personal will to make them so. Such a ‘universe’ is

pluralistic, really it is a *pluriverse*, in the sense that different forms of life, our selves included, are engaged in a psychical battle over the constitution of the world, which is not now and never will be a completed and closed causal nexus that expresses the singular eternal will of an omnipotent God or could be surveyed by the noetic eye of an omniscient God. There can be no such God in a pluralistic universe wherein experiential praxis is decisive.

There may, however, be “gods” or beings of superhuman stature, but, as James recognizes, these would be intelligences as finite as our selves and what they will to do with us is not necessarily in our interests. James critiques rationalizing philosophies of religion that are carried out in the manner of Kant’s *Religion Within the Limits of Reason Alone* – which will have featured prominently in my second chapter. Such philosophies of religion are based on a neo-Cartesian divide between a mechanistically determined realm of phenomenal experience and purely subjective intentions and interpretations of events that run parallel to physical events themselves but are not in any way their immediate causes. A view of this kind dismisses the whole mass of “supernatural” occurrences that pervade religious experience, including the “miraculous” quality of ‘revelation’ itself. James comes down in favor of “the crass miracles of old”, seeing them as vital to religion and as veridical experiences of the kind that his Society for Psychical Research began to study scientifically. What he means by this – and what I mean in agreeing with him – is that so-called “miracles” are not the supernatural interventions of an omnipotent deity who can break his own laws of Nature, but natural phenomena of the kind studied by psychical researchers and filtered out of mechanistic models of Nature.

I draw a comparison between the ‘revelation’ of the *Quran* to the prophet Muhammad and the case of a late 19th century mediumistic telepathic communication from a purported divine being to one Albert Le Baron who was, fortunately, an intellectual (unlike Muhammad) and who knew to enlist the aid of James’ parapsychological association to investigate his own experiences and discover their “awfully naughty” source. I argue that James is being inconsistent with his own radically empiricist approach to religious experience when he suggests that religion consists of the private struggle of “great souled” individuals, contemplative mystics such as St. Francis or Teresa of Avila, with their own extraordinary or ‘miraculous’ (paranormal)

experiences. In fact, he confesses that by narrowing the scope of religious experience in this way he is trying to avoid “much controversial material.”

With reference to numerous legal verses in *The Quran*, I make the point that revealed religion is a socio-politically binding phenomenon and, as James sometimes admits, the superhuman beings that are manipulating its various manifestations may be horrendously unethical. Whether or not religious revelations are socio-political interventions in human history on the part of elusive finite intelligences with apparently superior technology – including the *techne* of psi ability – is a scientific question. Of course, only a science that has freed itself from the mechanistic reductionism of the Cartesian paradigm will be able to answer such a question. James thinks that the next great scientific revolution, the one to move us beyond Cartesianism, will come from a serious study of paranormal phenomena. His work at the SPR, in no less a capacity than its presidency, had convinced him of the reality of various forms of ESP and PK and led him to the conclusion that the science of the future would not be ‘objective’ in the false sense of the impersonal science of the present. Personal forces would be accorded the status of real causes at work in the cosmos, and this would break down the dichotomy between “impersonal science” and a “personal religion” with a monopoly on ‘matters of faith’ that are respectfully exempted from empirical evaluation.

James does maintain that even after the coming scientific revolution, which allows for a radically empiricist study of the “supernatural” substrate of religious experience, there will remain something of Religion that is irreducible and ineradicable. He calls this “the infinite demand of the sacred” and he insists that those driven by it will always prevail on the “battlefield” of ideals. Chapter 8, and with it my text as a whole, arrives at its conclusion by identifying the gods of scientific explorers and inventive discoverers. Prometheus and Atlas epitomize the religious orientation towards life that James himself embraced and expressed with the shamanic metaphor of “the alpine eagle.” On the “battlefield” of sacred ideals the “infinite demand” of these *finite* gods, namely Prometheus and Atlas, disclose the partisans of Revelation as enemy combatants loyal to our would-be slave drivers. The specters of Technoscience drive us on in rebellion against the One True God, with a will to liberate the Earth from those who are content to be His slaves and who resentfully endeavor to enslave the alpine eagles of the

Earth. The temples of our cosmopolitan scientific society ought to be built on the ruins of their benighted world of enforced ignorance and ignoble obedience.

Chapter 1. The Next Scientific Revolution

There appears to be an archaic force that projects an inexhaustible variety of mythic symbols onto nature, irresistibly framing the world in terms of meaningful relationships. The rationalism of European modernity tried to suppress this prehistoric faculty, but in the end Modernism only amplified the force with which it continues to shape human life – albeit in occulted forms.¹ This projection is most commonly expressed in pre-modern cosmologies in terms of “the *firmament* of Heaven”, in other words as the boundless ocean of space conceived of as a *cosmic* ordering principle that begins with astronomical certainties and then reiterates these patterns in the *nomos* that governs more mundane levels.² The incomprehensible is turned into what is most firm; it becomes a “vault” or “dome” shielding man from the abyss of meaningless absurdity – an undefined source of angst far more terrifying than the definite evils conjured by Religion or the at least seemingly purposeful instrumentalization of life at the hands of Reason. Existential terror is thereby localized and historicized into a demonized enemy that one combats and hopes to overcome, an enemy that also serves to shore up one’s communal identity.³ Samuel Beckett once jotted notes that epitomize why it is better to focus one’s fear on imaginary, but definite monsters rather than to face the Incomprehensible as such:

This is how angst starts growing and [begins] to be transformed into the old, familiar physical pain. How translucent this mechanism now seems to me: at its core lies the principle that it is better to be afraid of something than of nothing. In the first case only a part of you is threatened, in the second case the whole of you, not to mention the monstrous quality that is an intrinsic and inseparable part of the incomprehensible, one might even say the boundless. And that angst is truly completely incomprehensible, for its causes lie in the depths of the past, and not just in the past of the individual (in this case the task would perhaps not be insoluble and life would not necessarily be tragic), *but of the family, the race, the nation, human beings, and of nature itself.*⁴

Anthropologists such as Claude Levi-Strauss have recognized that cultures are all

built on systems of binary oppositions – such as Heaven/Earth, Life/Death, God/Human, Male/Female, Food/Excrement, Human/Beast, and King/Pauper. The *spectral* has a de-structuring force that undoes these binary oppositions from a place between and beyond them – between in the sense of a *spectrum* and beyond in the sense of a *specter*.⁵ It is because the spectral represents the most extreme and enduring transgression of these binary oppositions that it provokes a terrifying feeling in many that, if the ‘reality’ of such phenomena are to be admitted, there is nothing solid and secure left in the whole world for them to hang on to at all.⁶

The taboos of totemic primitive cultures were primarily set in place to keep dangerous psychic forces at bay. When these taboos were deliberately violated it was usually to unleash this occulted power for some purpose or another, by inviting the conditions of psychical chaos conducive to it.⁷ The primitive’s ‘holy dread of the numinous’ as academics often like to characterize it, seems pitifully vague only if spectral phenomena are dismissed as delusional. Otherwise, one would have to recognize that the binary structures that undergird contemporary ‘scientific’ rationalism, especially in academia, are a new form of totemic taboo. The truly de-constructive breakthrough that marks the moment of departure from modern rationalism in the history of Philosophy as well as from the religious orthodoxy that has haunted us as its shadow, and the breakaway into a new age, will arrive through a fearless ontological, epistemological, and sociopolitical contemplation of the “*paranormal*” and of the *normalizing* mechanisms of disciplinary knowledge that have marginalized and framed the spectral as such.

Thomas Kuhn and Paul Feyerabend have studied how successive frameworks of scientific knowledge are constructed through socio-politically conditioned marginalization and exclusion, and both philosophers of science have had a deep impact on the postmodern movement to deconstruct the Cartesian paradigm. I begin this chapter by situating myself with respect to these two thinkers. I critique Kuhn for deferring to the reductionist approach of the prevailing paradigm in his ultimate ‘explanation’ of what goes on in the mind – rather, *in the brain* – when paradigm shifts take place. Feyerabend claims to share much of his understanding of changes in worldview with Kuhn but he actually means what Kuhn only ineffectually claims. What is even more significant for my purposes here concerns the way in which Feyerabend knows that his own position

diverges significantly from that of Kuhn insofar as he does not recognize the necessity of the exclusionary moves whose history they both trace. Kuhn recognizes that scientific revolutions always marginalize or exclude knowledge that is more adequate to certain phenomena than anything offered within the structure of the new paradigm, and yet he affirms these periods of exclusionary normalization as the indispensable precondition of revolutionary change. Consequently, Kuhn's work is descriptive; he is not really advocating a change in scientific practice. When viewed in these terms, the radical reform of scientific practice that Feyerabend *is* advocating would be something akin to placing research in a state of permanent revolution.

Insight into how paradigms are framed through the exclusion of worthwhile knowledge that might be revived only centuries later and awareness of how methodological criteria are violated whenever genuine discoveries are made ought to provoke a change in scientific practice. If facts cannot be isolated and accessed independently of our scientific theories, in other words if our facts are not only *theory-laden* but are constructed by the fundamental presuppositions of the worldview reflected in our theories, then it is misleading to maintain any sharp distinction between a context of discovery and a context of justification. Michel Foucault agrees that 'objective' facts are produced by discursive practices conditioned through and through by power relations. Bodies of scientific knowledge emerge from out of practices that are ideological and what scientific theories may possibly be advanced at a certain time and place is limited by an overall framework of knowledge, an *episteme* or worldview subject to periodic shifts. Testing our theories against 'facts' discovered by means of them is not the best way to find the limits of any given theory. Rather, we need to allow a proliferation of opposed theories that will produce different facts. Instead of abandoning incompatible worldviews and the theories to which they give rise, we should allow them to advance in dialectical tension with one another. In fact, if we want to maximize the sheer empirical content of the sciences by increasing the scope of scientific exploration and discovery, Feyerabend thinks that we ought to introduce counter-inductive hypotheses, drawn in some cases from discredited forms of knowledge such as Voodoo, Witchcraft, and Astrology as well as the ravings of contemporary madmen.

We also have to be prepared to use *and abuse* language in a way that is not tied to any one framework of knowledge. It is impossible to avoid the fact that our words are conditioned by concepts specific to one or another worldview, but we can break ourselves out of blind adherence to any one of these worldviews by bending the language that we have in ways that will at first seem inconsistent or even nonsensical. As Feyerabend shows through his analysis of the Copernican Revolution, this is, historically, how new languages are created at moments of revolutionary change in the sciences. We ought, however, to become conscious of this and actively embrace it. The logical insistence that all of one's terms be clearly defined in advance of their use in a theoretical evaluation of facts presupposes that nature has a consistency that our language ought to be geared to mirror, and a logically consistent theory will discover all the facts there are to be found. Yet the proliferation of incommensurable worldviews that all produce facts of their own suggests that – from this rationalist perspective – *nature* may be *wildly* illogical. Systems of logic are also historical contrivances and no one of them should be allowed to dominate linguistic practices that, although imprecise, dynamite their way to a discovery.

The use and abuse of language for this purpose is characteristic of the way in which I go on to present parapsychological research. While I am very careful to focus only on the 'facts' produced by the research in these areas without adopting the theoretical – and often outright metaphysical – interpretations that various researchers offer as an explanation of their empirical data, it is nonetheless the case that, as Feyerabend recognizes, these 'facts' are framed by conceptual constructs that implicate one or another worldview. The very words *telepathy*, *clairvoyance*, *precognition*, and *psychokinesis*, imply certain notions of the body and its relationship to the mind and other minds as well as the structure of time. However, as I pointed out in the introduction, such implications have always been amorphous and parapsychological research never yielded any definite scientific paradigm in the context of which its terms would be clearly defined. Moreover, since I am not attempting to generate such a paradigm, but to indicate what parapsychological research reveals about the way in which anticipatory projection and world-building frame the abyss of nature paradigmatically, it would be counter to my purpose to develop new terms to replace these. Instead, I will use the language that is available to me in ways that make it clear that, for example, by "extrasensory perception"

I do *not* mean non-sensory perception – which is a contradiction in terms – but perception outside known sensory channels, which is to say perception that makes us aware of the way in which our knowledge of the senses is not objective and has been framed by certain presuppositions. That I am not furthering any spiritualist or supernatural metaphysics that the reader may have wrongly supposed to pervade psychical research or Parapsychology in general becomes especially clear in my discussion of the relationship between instinct, intellect, and intuition in Chapter 4, where I focus on the psychic abilities of various non-human animals so as to demonstrate that what we have marginalized as “paranormal” abilities are entirely *natural* and astonishingly powerful in the simplest organisms.

My introduction of the problem of the paranormal in *this* opening chapter focuses on *why* it is that despite decades of fruitful research this evidence continues to be marginalized. I show that it is for good reason. Mainstream recognition of the various types of extrasensory perception and psychokinesis that parapsychologists have been researching for so long poses incomparably catastrophic dangers to every pillar of our social and economic order. Admitting that these phenomena are ‘real’ and allowing for certain, largely atrophied, latent natural abilities to be trained at a level commensurate with our technical civilization would demand such things as an abandonment of personal privacy, not only spatially but also the privacy of one’s thoughts and emotions, it would compromise the integrity of one’s agency with respect to one’s own body, divest us of our private property, and facilitate untraceable crimes that are committed with impunity.

1.1 Provoking Permanent Revolution, Not Just an Epistemic Paradigm Shift

It is instructive to take note how far from overturning the Cartesian paradigm definitive of modernity Thomas Kuhn’s analysis of scientific revolutions remains, despite being widely celebrated by advocates of ‘deconstruction.’ In the *Structure of Scientific Revolutions*, Kuhn draws a sharp distinction between normal science and “revolutionary science”. The former is a “puzzle solving” activity that works within an accepted *paradigm*. Its practitioners have common symbolic generalizations (laws, principles) and they share the same ontological/metaphysical model (for example: the atomic composition of the world) as well as the same values. A paradigm shift is a change of

world-view that occurs when anomalies pile up and lead to a crisis wherein competing factions fight for different new paradigms. In these crisis periods new paradigms are *not* chosen based on *rational* argument or experimental evidence. Scientists of competing paradigms cannot rationally convince one another because their basic standards of evaluation differ. For example, Newtonian physicists and followers of Einstein talked through one another when using the terms “mass”, “energy” or “gravity”, because these terms meant fundamentally different things for the two camps. They could not even disagree with each other because they were not talking about the same thing. Nor can Newtonian physics be rigorously modeled as a limiting case of Einsteinian physics.

According to Kuhn, their paradigms are incommensurable for four reasons: 1) Observations are always theory-laden; 2) The meaning of a term within a theory is given by the context of the entire theory and thus a lack of shared meanings does not allow scientists of different paradigms to communicate with one another; 3) There are no extra-paradigmatic standards that can decide between scientists who advocate different paradigms; 4) As a consequence of this, there can be no cumulative progress toward truth in the transition from one paradigm to another, but only through puzzle-solving within each paradigm. Our sensations are mediated by our education as members of a group with the same experience, language, and culture. According to Kuhn, it is only parochialism that makes us suspect that members of very different groups sense the world in the same way. Rather, because they have systematically (i.e. consistently internally related) different sensations in response to the same stimuli, members of different groups “do in *some sense* live in different worlds.”⁸

However, in the postscript to *The Structure of Scientific Revolutions*, Kuhn makes it clear that for him these differences are ultimately reducible to differently conditioned “neuro-cerebral mechanisms”.⁹ What, in the body of the book, Kuhn had hyperbolically referred to as living in one world rather than another, is “the result of neural processing, fully governed by physical and chemical laws.”¹⁰ Proponents of different paradigms share the “same... general neural apparatus”, it is only that this is “differently programmed.”¹¹ Kuhn explicitly describes the “gestalt switch” between paradigms in terms of “the neural programming that, however inscrutable at this time, must underlie conversion.”¹² Conversion from one paradigm to another, and even the genius insights that first make a

new paradigm possible are an “involuntary... process over which we have no control”, one that “must be as fully systematic as the beating of our hearts.”¹³ Kuhn goes so far as to say: “that we have access to alternatives, that we might, for example, have disobeyed a rule, or misapplied a criterion, or experimented with some other way of seeing... are just the sorts of things we cannot do.”¹⁴ For Kuhn, interpretation is not any more of a voluntary deliberative process than perception. It is only a different kind of programming of our neural apparatus “governed by the same *physico-chemical* laws that govern perception on the one hand and the beating of our hearts on the other.”¹⁵ When reduced to sensations that transform stimuli according to a differently “programmed perceptual mechanism”, the only objective value that shifting paradigms have is biological survival.¹⁶ Despite his deepest insights into revolutionary changes in science, Kuhn’s thinking remains mired in the mechanistic reductionism of the prevailing paradigm.

In *Against Method*, Paul Feyerabend claims that his views are “almost identical” to those of Thomas Kuhn, with the sole exception that he opposes the political autonomy of science that Kuhn would like to see.¹⁷ Yet in Feyerabend’s view, the expansion of our consciousness would be best served by allowing for an abiding tension between those conflicting fairy-tales or myths called “theories” without rejecting any one of them simply because, in one situation another seems to have an advantage over it, and allowing this tension to further proliferate theories that make new ‘facts’ possible.¹⁸ Feyerabend acknowledges that in this way his view departs significantly from that of Kuhn, with whom he otherwise claims to share so much in common, insofar as Kuhn does not believe that science can proceed without the ossified restriction and necessary blindness of periods of normalization.¹⁹ Feyerabend’s view is one that, from a Kuhnian perspective, would place scientific research in a state of *permanent* revolution. Theoretical uniformity cripples the critical power of science and constrains the free development of individuals, whereas the proliferation of theories encourages both.²⁰ Feyerabend undercuts himself by identifying so closely with Kuhn, and his call for a radical reform of scientific practice leads him to take an open-minded approach to what is marginalized as “paranormal.”

The belief that a clear and distinct grasp of new ideas precedes their practical application and institutionalization, either for creative or destructive purposes, is unfounded. The empirical methods of the sciences by and large presume that theories

ought to be evaluated against observed ‘facts’ and revised or replaced accordingly. However, this is to lose sight of the way in which so-called ‘facts’ are already conditioned by theoretical assumptions, the way in which they incorporate certain conceptual constructs that, in the broadest sense, tacitly implicate an entire worldview that is enfolded into a given ‘fact.’

Before going on to elaborate on how Feyerabend takes facts to be constructed, I would like to introduce Michel Foucault’s understanding of essentially the same process. In *The Archeology of Knowledge*, Foucault shows how an object does not preexist the order that embodies it and allows it to become visible, as if it were laying in wait to be known in the truth of its concept and as if the way in which it is known is a rationality immanent to it; rather, any object is constituted by the group of relations through which it is known, namely relations “established between institutions, economic and social processes, behavioral patterns, systems of norms, techniques, types of classification, modes of characterization” and so forth.²¹ Words do not signify things; discourse is not an interface between language and some reality independent of it.²² There are no ‘things’ anterior to the way in which rules are employed in discourse *as a practice* in order to form the regularity of objects, and so there is also no *ground* or *foundation of things* that discourse, as it were, reaches towards or attempts to excavate.²³ Objects are formed and deformed, and they appear and disappear, only from out of the tangle of discursive practice.²⁴ There is a superstructure of all discursive practices tending towards scientificity and encompassing all formal sciences, wherein certain regulative norms knit them together *in practice* as an over-arching framework of knowledge. Foucault dubs this worldview an *episteme*.²⁵ What one learns under a given *episteme* conditions even the perceptual process of what one sees in such a way as to affect what one accepts as a probable or improbable construction of what is being looked at, and is determinative of what one deduces and postulates in view of it.²⁶ His archeology of knowledge is concerned, in the broadest terms, with understanding periodic *episteme* shifts.²⁷

Modern humanism has wanted to imagine that those who wield power are maddened by it and therefore blinded to what knowledge may be attained by one who, like the Cartesian meditator, endeavors to know with impartial neutrality and in quiet solitude – a solitude wherein even the ulterior motives driven by one’s passions have

been quieted as obstacles to objectivity.²⁸ In the next chapter, we will see how far this isolation of the quest for knowledge from the machinations of power was from the actual experience of Descartes. The point here is that I agree entirely with Foucault when he says that knowledge and power are inextricably bound up with one another. In fact, there is no distinction between them.²⁹ It is not only the case that mechanisms of power require bodies of knowledge in order to operate, so that, for example, the effective sovereign always has men of science in his retinue, but that any body of knowledge is first and foremost produced through and through by power relations that do not *reflect* ‘reality’. The metaphor of the mirror of objective cognition is itself a construction of power. The production of the subject qua conscious knower is a process of subjectification or subjection.³⁰ Power does not target individuals for repression; individuals are nodes in the mesh of the “net-like organization” of power, they are not its points of application but its elements of articulation.³¹ It is naïve to think that power is gained over a population in a descending fashion, through a ‘mere ideology’ imposed from the top down; in fact, infinitesimal techniques and strategic tactics operating in every day life produce institutions such as the State with its ideology or the ‘revolutionary’ Party that reproduces a repressive State ostensibly to protect the ‘revolution.’³²

Power ought not to be thought of as nothing more than forces of repression. What are these forces repressing? Personal identity, the characteristics of the individual, psychically and in terms of the disciplinary regulation of his or her body – all these are the effects of certain power structures.³³ There are even “sub-individuals” engaged in a power struggle to produce the person.³⁴ It is to think of power as weak when one imagines that it acts only negatively on pre-existing persons, whose self-expression and individuation are somehow repressed by oppressive institutions.³⁵ Power is everything positive, and nothing in particular. It exists not as an accumulation of some substance by one or another agency who may deploy it against others as if he stands outside of it, but always only as a relation of forces perpetually reconstituted in action.³⁶ Adopting Nietzsche’s formulation in *The Will to Power*,³⁷ Foucault says that: “Power in the substantive sense, *le pouvoir*, doesn’t exist. What I mean is this. The idea that there is either located at – or emanating from – a given point something which is a ‘power’ seems

to me to be based on a misguided analysis... In reality power means relations, a more-or-less organized, hierarchical, co-ordinated cluster of relations.”³⁸

Discursive practices at first produce what Foucault calls a *positivity* – an initial stage of knowledge wherein a coherent context for advancing theories about things takes shape, which is more than a mere hodgepodge of elements drawn from various potentially incommensurate sources (traditions, already established sciences, etc.) according to an eccentric viewpoint that may seem arbitrary to all but one person. Positivities of knowledge undergo *epistemologization* when they develop their own internal criteria for evaluating truth claims emanating from other discursive practices, in other words when they begin to establish a hegemony over other positivities by building a model or framework into which everything anyone thinks that they ‘know’ must be fit. A further threshold of *scientificity* is crossed when the rules, laws, methods, and so forth that define the expansion of knowledge attain a certain degree of complexity and hierarchical compartmentalization. The final stage in the emergence of a science is its crossing of the threshold of *formalization*, wherein a widely accepted and well defined body of axioms allows proponents of the science to reconstruct and apply their own system for the apparent attainment of knowledge and its furtherance.³⁹

Foucault admits that even the most formal sciences, such as Physics and Chemistry, cannot be disentangled from a background of knowledge that initially formed the positivity from out of which they were formalized.⁴⁰ He also acknowledges that insofar as these sciences emerge from out of the element of the discursive practices that first defined the objects and concepts of the positivity that engendered them, these formal sciences remain ideological.⁴¹ A critique of their ideology is not possible through an examination of internal contradictions within a science’s system of truth claims, since all of these reflect its ideologization, but through an analysis of the discursive practices constituting the positivity from out of which first an epistemological framework and then the fully formalized science is constructed.⁴²

In *Against Method*, Feyerabend agrees with Foucault that observations are already ideological and we ought not to take observational ideologies for granted if we want to expand our scope of discovery rather than tacitly reaffirm the framework of some older cosmology that is latent in concepts so basic that they structure our perception in the first

place.⁴³ Observations are not only theory-laden, as Kuhn and others have noted, they are fully theoretical; the distinction between observation statements and theoretical ones is purely pragmatic.⁴⁴ Evidence has a “historico-physiological character” that tacitly “expresses subjective, mythical, and long-forgotten views...”⁴⁵ The elements of our knowledge – various theories, observations of ‘facts’, principles of argumentation, and so forth – are conditioned products of historical processes subject to uneven development.⁴⁶ To assert a firm distinction between a context of discovery and a context of justification is to falsely assume that these are timeless elements all equally accessible and related to one another in a way that is independent of the historical events that produced them.⁴⁷

He also agrees with Foucault that knowledge is constructed through discursive practices and that language does not reach out towards a pre-existing ‘reality’ so as to represent it in an isomorphic manner, as many logicians assume that it does. Ideas are discovered only through action, in a manner akin to how children grasp the meaning of words by first playing with them in many nonsensical ways. This playful activity remains an essential prerequisite to acts of understanding in adults as well.⁴⁸ Feyerabend observes that “the actual development of institutions, ideas, practices, and so on, often *does not start from a problem* but rather from some extraneous activity, such as playing...” which is only in retrospect interpreted as providing the solutions to problems.⁴⁹ The process is not guided by a program, but by a passion that is the condition of possibility for any and all ‘rational’ programs arising from out of the behavior it inspires.⁵⁰ Feyerabend acknowledges that progressive educators show a great deal of concern for the individual development of children so as to make sure that the quite possibly unique contribution of one or another child is not snuffed out by an overly standardized and regimented education. This is, however, a losing battle insofar as children need to be prepared for practical conduct in the world that we actually live in as adults. That is a world where the rationalist standards of scientific knowledge have become so pervasive that if the exercise of the imagination that is so strong in young children survives at all, it is channeled into ‘purely artistic’ or ‘literary’ endeavors that elaborate a dream world that offers no more than an escape from the ‘real’ world. Reforming scientific practice in the ways that Feyerabend suggests will, as he sees it, retain and cultivate the power of the imagination

as a vital force in scientific exploration and an agent of change *in* the world rather than a mere means of escape *from* it.⁵¹

To break new ground in thought, to express ideas for which there is as yet no appropriate discourse, already existing language “must be distorted, misused, beaten into new patterns” appropriate to unforeseen situations; Feyerabend goes so far as to say that “without a constant misuse of language there cannot be any discovery, any progress.”⁵² This means that scientific practice ought to take an anthropological attitude towards logic and be open to praxis that would be deemed “wildly illogical” by logicians.⁵³ The latter insist on having all relevant terms clearly defined before engaging in a discussion of some scientific or philosophical question, but this inherently means precluding the possibility of dis-covering or uncovering phenomena that are covered over by the cultural-historically conditioned extant conceptual constructs of our language.⁵⁴ A new worldview is built only out of fundamental conceptual changes, after which it takes time for a new language to be clearly defined in its internal structure.⁵⁵ Thus in transitional phases between worldviews we have to be open to more free-flowing discussions with a view to creating “a language of the future”, and that “means *that one must learn to argue with unexplained terms and to use sentences for which no clear rules of usage are as yet available.*”⁵⁶ Feyerabend once again draws a comparison between a child’s at first nonsensical playing with language and the way in which words must be provisionally used and abused by “the inventor of a new world-view” who “must be able to talk nonsense until the amount of nonsense created by him and his friends is big enough to give sense to all its parts.”⁵⁷ Feyerabend quotes Plato’s *Theatetus* to the effect that there is actually something barbarous and uncultivated about needing to be too formal and precise in one’s discourse: “To use words and phrases in an easy going way without scrutinizing them too curiously is not, in general, a mark of ill breeding; on the contrary, there is something low bred in being too precise...”⁵⁸

Feyerabend asks us to suppose that there are two theories that both account for a certain set of ‘facts’ in their own ways but extend in scope beyond these facts in ways that remain untested. Current scientific practice in accordance with the “consistency condition” gives preference to the first theory that is adequate to the facts over all latecomers. This means that theories or hypotheses are often not even eliminated on

account of disagreement with known ‘facts’, but on the basis of their disagreement with older theories that do not explain these facts in any way that is inherently superior.⁵⁹ The seemingly reasonable core of the consistency condition is that a proliferation of incompatible hypotheses that are all adequate to the facts will not result in progress the way that examination of incompatible facts will once one has focused on a particular theory that can be changed to remedy its disagreement with certain of these facts.⁶⁰

This motivation for the consistency condition would be reasonable only if ‘facts’ had an autonomous existence that made them readily available independently of the theory that they are being used to test. This “autonomy principle” concerning facts is, however, invalid if the theory in question is in part responsible for constructing those ‘facts’ that will be observable in the context of the worldview foundational to this theory.⁶¹ There are, as Feyerabend puts it “facts which cannot be unearthed except with the help of alternatives to the theory to be tested, and which become unavailable as soon as such alternatives are excluded.”⁶² Proper evaluations of the empirical content of scientific theories can only be carried out by embracing overlapping, factually adequate but mutually inconsistent theories.⁶³ The consistency condition is in disagreement with genuine empiricism, which demands the invention of alternative theories that increase the overall empirical content of scientific research by producing ‘facts’ that would not have been thought to be possible.⁶⁴ Alternative theories are a prerequisite of the facts taken to refute a given theory. Counterinduction and the admission of unsupported hypotheses at least increase the range of falsified theories through which we observe different aspects of nature.⁶⁵

Alternatives need not be contrived out of whole cloth. The history of thought is a rich resource for them. The so-called Copernican view was, after all, a feature of Pythagorean thought that was revived in large part through the renaissance study of the Hermetic scriptures, a study that no less than a modern scientific mind than Newton took very seriously.⁶⁶ The distinction between the history of science, philosophy of science, and scientific practice itself ought to be abolished if the latter intends to produce anything other than “minute, precise, but utterly barren results.”⁶⁷ This convergence of what are now three distinct disciplines ultimately abolishes “the separation between science and non-science” as well.⁶⁸ Taking a richly historical and self-critically philosophical

approach, scientific research ought to draw from “ancient myths and modern prejudices” as well as “the lucubrations of experts and from the fantasies of cranks” to field alternatives to predominant theories.⁶⁹ Feyerabend repeats this radical injunction:

Therefore, the first step in our criticism of customary concepts and customary reactions is to step outside the circle and either to invent a new conceptual system, for example a new theory, that clashes with the most carefully established observational results and confounds the most plausible theoretical principles, or to import such a system from outside science, from religion, from mythology, from the ideas of incompetents, or the ramblings of madmen.⁷⁰

To those who criticize him that this would mean taking practices such as Voodoo seriously, Feyerabend responds that indeed even Voodoo has a great deal to teach a rationalistic reductionist about physiology.⁷¹ Feyerabend notes that the scientific revolution of the 17-18th century led to greater precision in Physics and Chemistry but to a decline in psychological understanding on account of the rejection of extensive medieval psychopathology concerning demonic possession, the psychical abilities and states of those suspected to be practitioners of Witchcraft, as well as the abandonment of Astrology, with its understanding of certain astronomical influences on biological processes.⁷² While I remain very skeptical of Astrology in any form, solid research on a whole range of paranormal phenomena and abilities has the potential to place scientific practice in a state of permanent revolution. Evidence for telepathy, clairvoyance, precognition, and psychokinesis can serve as the raw material for constructing the counter-inductive hypotheses that Feyerabend sees as integral to this transformation. We ought to revolutionize scientific practice by using and abusing language to study phenomena marginalized by dominant standards of method that are constraining the spirit of scientific exploration and unnecessarily limiting the scope of discovery.

1.2 Revolutionary Research at the Margins of ‘Reality’

Telepathy appears to be the most common form of extrasensory perception. Derived from the Greek words *tele* meaning “distant” (as in telephone or television) and *pathe* meaning “feeling” (as in empathy and sympathy), it literally means “distant

feeling”.⁷³ As with other forms of extrasensory perception, telepathy seems to have deep roots in the animal kingdom and to play a significant role in communication between humans and animals.⁷⁴ However, this will be discussed at length in Chapter 4 in the context of a consideration of the evolutionary interplay between instinct, intellect, and intuition. Telepathy manifests within human life in a number of different ways, many of which may have been encountered by the average person.

Husbands and wives, parents and children, and above all passionate lovers, will sometimes know what the other person is going to say before they say it. One person may say or actually do what the other is thinking.⁷⁵ On other occasions such persons are able to communicate the gist of what they are thinking to each other through mere glances.⁷⁶ Thoughts appear to be more readily communicable when they involve vivid images and those who are having difficulty explaining something in a technical manner find that the person to whom they are attempting to explain it will catch on quickly if they very clearly picture what they are trying to convey.⁷⁷ Musical tunes that one person is thinking appear to be readily communicable to others close to her who might begin to vocally hum what she was only hearing in her mind without having said a word about it.⁷⁸ Persons close to one another will also sometimes share each other’s dreams, which they recount to each other later on. Researchers at the Maimonides Medical Center in New York have carried out experiments that suggest that the dream state is especially conducive to the telepathic transmission of images.⁷⁹ Having the sense of being stared at, which can be so uncanny that one feels oneself not only being watched but being gripped at the back of the neck, only to turn around and find oneself the focus of someone’s intense gaze is another common form of telepathy.⁸⁰

There are numerous forms of telepathic “calls” from one person to another. One common type is that wherein a mother starts to wake up every time her baby is about to start crying in the night. In these cases the mother awakens before the child has made any noise, as can sometimes be attested to by another witness, such as the father, and sufficiently in advance of the baby’s restless stirring so as to prepare the feed.⁸¹ We find a more intense and also more verifiable version of the same basic phenomenon in the many cases of people who intuitively respond to others in distress who have no means of directly communicating with them. In some of these cases the intuition or even the

seemingly visual or auditory sense of the other person's distress will affect them so deeply that they drop whatever they are doing in order to reach this person. Such people respond in a similar way as those who receive post hypnotic suggestions.⁸² Of course, cases of this kind had more opportunity to manifest in the era before nearly instantaneous telephone communications.

Indeed, telepathy in the context of telephone calls is now the most widely experienced form of the phenomenon. Surveys suggest that a majority of people have experienced telephone telepathy.⁸³ In some such cases a person may be thinking about someone with whom they have not spoken for a long time, or that has perhaps not even been the focus of their thoughts for quite a while, and then the phone will ring and it will be that person.⁸⁴ In other such cases one may not be thinking of anyone in particular but when the phone rings one will know in advance who it is that is calling, even if the call is completely unexpected. Some persons report that in cases of this kind the ringing of the phone seems to sound different depending on the person calling.⁸⁵ (We are of course, talking about cases in the era before one could actually set different ringtones for different people on cell phones, which, for that matter, have built-in caller IDs.) Another kind of telephone telepathy is that wherein, without any prior arrangement, two people go to call each other at exactly the same time. One might tell the other that he had his hand on the phone when it rang, or that he got a busy signal the first time he tried calling because the other person was already trying to call him.⁸⁶

Telepathy of this type is especially amenable to scientifically controlled tests. The Cambridge biologist Rupert Sheldrake (who will be the subject of a more extended discussion in Chapter 4 for his research on ESP in animals) has developed the following methodology for the many telephone telepathy experiments that he has administered.⁸⁷ One aim of this experimental protocol is to eliminate the possibility that chance coincidence and selective memory are conspiring to produce the illusion of telephone telepathy.⁸⁸ First of all, everyone involved in the experiment is being recorded with a time-coded video camera. Four potential callers are on standby to make calls to a fifth person within a fixed time frame, say between 2:00 and 2:20pm. A sixth person, one of the experimenters, rolls a die or in some other random way selects the person who will make the call. After 2:00 one person on standby knows that he will be making a call to

the subject and the other three know that they will not be the ones to do so. At 2:15 the call is made (obviously to a phone without any form of caller ID). Before picking up the receiver, the subject states to the camera who she thinks is calling and how confident she feels about her guess. Then she answers the phone by first referring to the caller by name and finds out whether she has guessed correctly or not. By September of 2002, Sheldrake had conducted 854 tests of this kind with 65 different subjects with an overall success rate of 42%, whereas if there were no telepathy involved the average success rate of the subjects' guesses ought to have been only 25%.⁸⁹ This is very statistically significant, amounting to odds against chance of 10^{26} to 1^5 . Women, in general, had a considerably higher success rate than men.⁹⁰ (One familiar with parapsychological research will know that this holds true of every type of psi ability.) The most successful of the test subjects had a personal average of around 48% in 130 tests, with the odds against chance being more than 100 million to 1.⁹¹ She had a 75% success rate when the caller was her closest friend. In fact, the emotional bond between callers seems to render distance negligible. Callers who are as far away from one another as antipodes of the Earth can have a higher hit rate with family members that they have left back at home while traveling than they have with persons in the foreign locale where they are staying.⁹²

Every form of telepathy seems to occur most frequently between people who are closely bonded.⁹³ One particularly striking example of this are cases where one of two lovers is struck with vivid images and feelings such as panic, loneliness, and despair, when their partner or spouse is engaging in acts of infidelity. Sometimes the person experiencing the betrayal will even know where and just when their lover was having sex with someone else.⁹⁴ Cases of this kind are so striking because information appears to be extracted from one mind by another when the former is actively trying to conceal it rather than to convey it.⁹⁵ Such experiences also seem to involve what parapsychologists call direct mental interactions with living systems (DMILS) that can be measured by placing electrodes on the fingers of a subject to gage their skin resistance, which is affected by emotionally conditioned physiological response such as perspiration.⁹⁶ In other words, people can be emotionally and physiologically affected by the thoughts or intentions of others without even being consciously aware of what these are.⁹⁷ Two closely related exceptions to the rule that telepathy is strongest between emotionally bonded people

exacerbate the ethical concerns that this situation raises with respect to the privacy of one's thoughts and the integrity of one's personal intentions. Psychotherapists and hypnotists can build bonds with clients that are more conducive to telepathy than the bonds that these clients enjoy with their friends, family, and lovers.

As I will discuss extensively in Chapter 5, in the context of Jacques Derrida's reflections on Telepathy, Sigmund Freud was already aware that what he referred to clinically as the danger of transference and countertransference is not limited to ordinary emotional entanglement between the therapist and the client, but is a process that can involve "thought transference" and dream telepathy.⁹⁸ This remains one of the 'dirty secrets' of the practice of Freudian psychoanalysis, and is even more prevalent in Jungian psychotherapy on account of Carl Jung's open admission and embrace of such a rapport between the analyst and the client.⁹⁹ Robert Stoller and Elizabeth Mayer are two psychoanalysts who have spoken of their own experiences of this kind and have become advocates of admitting how common these are in the practice of psychotherapy.

Ever since Franz Anton Mesmer began to formalize his understanding of what had been called "animal magnetism" into the practice of "mesmerism" or clinical hypnosis in the early 1800s, doctors have noted that mesmerized or hypnotized patients could develop a sympathetic "rapport" or "community of sensation" with them.¹⁰⁰ In the early days of hypnotism, when it was being used to control pain during surgical operations, doctors such as James Esdaile noted that their patients could be made to taste anything that they were eating or drinking while the patient was hypnotized. Alfred Russel Wallace, who forwarded the theory of evolution together with Charles Darwin, carried out experiments testing this, which also demonstrated that pains induced in the doctor could be suddenly conveyed to the same part of the body in the hypnotized patient.¹⁰¹ The patients could feel the subtlest sensations, such as a hair tickling the forehead of the hypnotist, and they were capable of answering questions in foreign languages that they had never learned but were known by the hypnotist.¹⁰² Most significantly, some hypnotized patients appeared to gain access to the secret thoughts of those putting them into the trance.¹⁰³ Finally, some of the early masters of mesmerism claimed to be able to hypnotize people at a distance to similar effect, except that a person who was, say, being put to sleep from half a mile away would awaken again the moment

the hypnotists' attention wavered.¹⁰⁴ The subject of such telepathic hypnosis would, for example, describe the sensation of a hand pressed on her forehead as the hypnotist stretched his hand out toward her house and brought his "will sharply to bear" upon eliciting some state in her, such as pain relief.¹⁰⁵ One could, conversely, will someone to be in pain, and as the DMILS studies suggest this psychic impression can have physiological effects.

This is exactly what the United States government trained certain of its operatives in a special psychic intelligence unit to do, at least according to numerous insider accounts including that of Lynn Buchanan – who taught most of the military officers in the program to cultivate a variety of psychic abilities with intelligence applications. During Operation Desert Storm, Buchanan was tasked with accessing the mind of Saddam Hussein and making him ill. As Buchanan recounts, he was initially ordered to kill Hussein but refused and offered to make him sick instead; unfortunately, he also made himself very sick in the process.¹⁰⁶ He discovered that although you "can actually access that person mentally and bring back their most deep-seated thoughts, feelings, emotions, motivations, fears, desires, drives, reservations, and everything else that might be there to drive their actions" this process requires the operative to "begin feeling the target person's feelings and actually thinking the target person's thoughts" until his "way of thinking actually becomes your way of thinking" so that even after the session is over "you are left with some remnants of that target person's emotions, thoughts, aspirations, attitudes, and morals."¹⁰⁷ Part of Buchanan's training regiment for the military officers in the program, which he describes as a "mental martial art," was to teach them meditative techniques for becoming more self-aware, introspective, and mentally disciplined so as to guard against psychical contamination of this kind.

The program into which Buchanan was recruited and for which he eventually became the key instructor began at the Stanford Research Institute (SRI) in the early 1970s, where laser physicists Russel Targ and Harold Puthoff conducted experiments aimed at the development of a trainable, technical protocol for clairvoyance referred to as "Remote Viewing".¹⁰⁸ In a remote viewing trial the viewer and the person sent to the target site would be isolated from one another. The person traveling to the target would take ten envelopes containing potential sites and would not select one of them until after

half an hour of driving. Furthermore, the selection of which of the ten envelopes was to be opened would be determined, not by him, but by a portable random number generator. The viewer, who would have 15 minutes to sketch and verbally describe the site, would begin doing so 10 minutes after the person going out into the field had left, meaning that her ‘viewing’ session would be complete at least 5 minutes before the outbound researcher consults the random number generator and selects the target from out of the corresponding envelope. Once at the target site, the field agent would spend 15 minutes wandering around there. A panel of three judges, scientists at SRI who were not otherwise connected with the project, would be tasked with matching the raw data obtained from the remote viewer with the contents of one of the ten target envelopes. The precognitive remote viewing trials were repeatedly successful, with identifications made independently by the three judges, with odds against chance of better than 20:1.

As results of high caliber were obtained across the Remote Viewing program, the US military and intelligence interests that were funding the work at SRI took over the whole project, and it passed from an experimental stage (in the 1970s) into an operational phase (in the 1980s). It changed hands between the Department of Defense (who renamed it project “Grill Flame”) and the Central Intelligence Agency (project “Star Gate”), until it was disbanded and its existence was publically admitted in congressional hearings in 1993. It is during the military-intelligence application of Remote Viewing that the true breadth and significance of the abilities discovered at SRI were explored.¹⁰⁹

This was largely the outcome of two difficulties encountered in the attempt to produce valuable intelligence on a target site *in the present*. First, it was often the case that a viewer would slide around in time at a given site, locking in, if at all, on that site during the period in its history when the most dramatic events were taking place. Second, when viewers were really fascinated by something at a target site, the connection of their consciousness to the persons querying them at the project facility became increasingly remote. On numerous occasions a total breakdown of communication occurred as a consequence of the remote viewer actually coming to *be there* at the site, instead of ‘remotely *viewing*’ it in a detached enough manner as to be able to report his findings. Such Out of Body Experiences (OBE) were named “bi-location” to both future and past

times/places – so that those present there/*then* could ‘see’ the remote viewer as an apparition.¹¹⁰

The Princeton Engineering Anomalies Research (PEAR) program at Princeton University replicated the remote perception studies carried out at the Stanford Research Institute and then implemented operationally by the US government’s remote viewers. In February of 2007, the PEAR program completed 28 years of experimental studies concerning "the role of consciousness in the establishment of physical reality." The program was headed by Dr. Robert Jahn, Dean Emeritus of Princeton’s School of Engineering and Applied Sciences. Jahn and his collaborator summarized their initial findings and drew some tentative conclusions in their book *Margins of Reality: The Role of Consciousness in the Physical World*.¹¹¹ A briefer but more updated account is presented in their article “The PEAR Proposition” for the *Journal of Scientific Exploration*.¹¹²

The “Precognition Remote Perception” (PRP) experiments at Princeton involved a percipient and an agent, between whom there would be no communication for the duration of the experiment. Each of the two participants would be given a 30-item descriptor sheet, wherein they had to choose to describe a given target site as indoors / outdoors, dark / light, artificial / natural, inhabited by / vacant of humans or animals, loud / quiet, etc. They would preface this checklist with a brief written summary of the site. The PRP researchers used both instructional and volitional methods. In the *instructional* method a Random Event Generator would select a given site from a computer database. The site’s location would be given to the agent in a sealed envelope not to be opened until he left the laboratory. In the *volitional* method the agent would leave the laboratory to select a site by his own whim, without anyone being informed beforehand of where he would choose to go.

The reason why the PRP researchers added the word “precognition” to what were supposed to be experiments merely testing “remote perception”, is that they found that in a majority of cases the percipient was able to describe the site well *before* the agent arrived there, and in some instances even before a given site had been chosen. The 30-item descriptor lists filled out by the two participants allowed for a statistical determination of whether, and to what degree, any given trial was a success. By 1987 125

trials had been conducted in the instructional mode and 209 in the volitional mode. The meta-analysis of these 334 trials spoke in favor of the participants' ability to successfully engage in "precognition remote perception" with odds against chance of *a billion to one* in the instructional trials and 100,000 to 1 in the volitional trials.¹¹³

PEAR also amassed impressive evidence for psychokinesis. PEAR's psychokinesis experiments were initially based around an improved version of a Random Number Generator (RNG), or 'electronic coin flipper', designed for similar experiments by the physicist Helmut Schmidt in the 1960s. Jahn's Random Event Generator (REG) employs a circuit designed in such a manner that a quantum process such as the radioactive decay rate of the nuclei of a small amount of an isotope such as Strontium 90, is amplified to provide truly random electronic spikes a few thousand times per second. The spike interrupts a clock or counter, crystal controlled for precision and counting at around 10 million cycles per second in oscillation between the random bits "1" and "0". The REG is wired to a computer that automates data collecting by recording whether the spike occurs when the clock is at "1" or "0", so that the data can then be statistically analyzed for an inordinate occurrence of either under the influence of the participant, compared against the random output of the REGs. These were set to generate 100 bits within a predetermined span of time, 50 of which would be 1 and 50 of which would be 0, on average. Furthermore, Jahn encased the device in a shielding that eliminated the effect of heat, seismic vibration, sounds, electromagnetic waves, and set off a fail-safe alarm if the energetic insulation of the device were to be compromised by any physically known forces or fields.

The REG's were hooked up to computer monitors that allowed participants to view their digital output (so as to give them some sense of feedback in their attempts to deviate it from standard). The viewer would see a graph with two axes, a vertical axis counting "bits" and a horizontal axis for "trials". Participants would be asked to perform one of three tasks: 1) will the REG to produce *more* bits of 1 or 0 than it randomly would (for example, 52 1s vs. 48 0s, or 43 1s vs. 57 0s); 2) focus their minds on influencing the output of the REG toward *lower* values than the baseline; 3) try not to influence the REG output, so as to maintain a baseline distribution. The intention would be logged into the computer at the outset of each run including many micro 'trials'. The random output

would appear as a line erratically crossing the graph between the upper and lower limits of a horizontally oriented parabola that represents the maximum limits of variation within chance (with the baseline in the middle of the parabola). As the composite line is formed by the REG data, the participant tries to get it to either rise up out of the upper limit of the parabola, sink down below its lower limit, or remain within its bounds. Jahn also developed a Random Mechanical Cascade machine that dropped 9000 polystyrene balls down a latticework of pegs, which participants would be asked to mentally affect in such a way that more balls fall to the right or left than they would randomly. In both cases the machines were routinely run with no participant engaging them, as control tests.

Most interestingly, time and distance did not seem to be a relevant factor. A participant in Hong Kong could receive a call from Princeton saying that a trial would be run at 3pm Princeton time. The participant would then hang up and call back at some time after 3pm to report, without knowing the results of the trial, that he attempted to influence the machine with such and such intention at 10am Princeton time or at 6pm Princeton time. The PEAR lab will only then inform the participant that his earlier or later intention successfully affected the outcome of the 3pm trial, deviating it significantly from chance. This, of course, does *not* work if the participant is told the outcome of the 3pm trial at, say 3:30pm, and then tries to influence that outcome at 6pm.

The REGs were routinely run with no participant attempting to affect them, as control tests. Participants were not subject to any psychological tests, relaxation protocols, or trained in techniques of any kind. In order to address the issue of performer fraud, Jahn ultimately ran millions of trials with over a hundred individuals. The data was then parsed using statistical Meta-analysis, so that the trials were not a test of the ability of any one participant, but of a human capability in general. This analysis arrived at odds against chance of a "few parts in ten thousand" in each individual trial of mind-machine interaction, and "less than one part in a trillion" for the composite anomaly represented by the entire database.¹¹⁴ The deviations from mean, while small in any given trial, compound to being very statistically significant over millions of trials.

1.3 Unconscious Terror Over Opening the Floodgates

Why have phenomena such as extrasensory perception and psychokinesis been so marginalized? It is a question of the inextricability of Knowledge and Power, which Foucault and Feyerabend understood so well. Kuhn's mere *analogy* between upheavals in scientific knowledge and political revolutions falls short. By now one ought to have imagined some of the revolutionary social, political, and economic implications of acknowledging "paranormal" human abilities and experiences. Yet, I intend for the reader to face these squarely because it is unconscious fear of these intuited implications that is in all likelihood responsible for dismissively ridiculing parapsychological research.

The observation that very successful parapsychology experiments, which have been replicated a few times, fail to be replicated when there is a strong skeptic present has prompted numerous parapsychological studies on the "psi inhibitor" effect.¹¹⁵ These studies have demonstrated that subconscious fear of the paranormal can suppress psychical abilities, not only in the fearful individual but in others in his or her vicinity as well. The "negative psi effect" is also well known among parapsychologists. A hostile skeptic, who may be afraid of his own potential ability, engaged in a task such as telepathically guessing Zener card figures might underperform so badly that he attains a statistically significant deviation far *below* the hit rate expected by chance.¹¹⁶ The psi-inhibitor and negative psi effect taken together suggest that the widespread skepticism concerning the paranormal is acting as a levee or dam containing what would otherwise be far more dramatic manifestations of psychic ability. This might explain why paranormal phenomena were more frequent and dramatic in earlier epochs of human history when the belief that they were "impossible" had not yet been deeply engrained in the collective psyche. If these phenomena were to receive mainstream scientific validation, not only would improved techniques for cultivating them be developed, innate aptitude for developing them might also be observed to increase at least among certain individuals. Psychologists such as Charles Tart have already developed feedback machines designed to enhance ESP.¹¹⁷

People who could develop and hone their telepathic abilities would be able to read thoughts and emotions in the minds of others, especially those whose comparatively undeveloped extrasensory perception left them without a clue that their minds were being

probed. What one thinks and feels, even in the most intimate depth of one's psyche, would no longer be private. Adept telepaths might even be able to penetrate the subconscious mind of another individual and thereby come to know that person's character better than he or she knows herself. Highly competent clairvoyants or "remote viewers" would be able to invisibly observe anyone, anywhere, doing anything. This ability could be used to spy on ordinary people in their bedrooms at night, or it could be used to uncover the most classified state secrets of any government. If various hostile governments were to fully develop and extensively adopt remote viewing techniques, or if terrorist groups or non-governmental entities opposed to state secrecy were to do so, National Security would be effectively nullified along with the viability of the nation state as we know it.

As I noted above, the remote viewers of the United States government also had an operational capability of looking into future events. The economic implications of this are devastating. Corporations would be utterly incapable of protecting patents that they had not yet even invented and so intellectual property laws that competitively drive innovation would be unenforceable. Although clairvoyance is notoriously limited when it comes to discerning numbers, precognition could be used to more generally ascertain which corporations would collapse or experience sudden growth in the future. Speculative insider stock trading based on this kind of information would wreak havoc on the market. A number of the remote viewers who worked in the defunct CIA and DOD programs have recently established private enterprises essentially offering corporate espionage services to Fortune 500 companies, but since psi continues to be widely dismissed those offering and utilizing these services are still too insignificant to affect the economy at large. There are also more personally disturbing implications of precognitive abilities being effectively developed beyond the occasional dream in which future events are seen through a glass darkly. If individuals were able to look into their future fairly clearly and reliably, either on their own or by contracting someone competent to do so, they would be able to behold all of the significant events to come – their great successes, the terrible tragedies that may befall them, the circumstances of their own deaths and those of the people dearest to them. They might resign themselves to fatalism, which

ironically prevents them from doing what they would have, or they might engage in desperate, highly erratic attempts to revise the timeline of their lives.

If only this changed attitude toward the future could be limited to their own lives, or the lives of their friends and relatives. What if an individual has seen that a certain politician running for offices of ever greater authority will go on to be the next genocidal world leader – is he justified in assassinating that person to save the lives of innumerable innocents who will someday be the victims of this tyrant? Leaving mass murderers aside, what of every common criminal whose misdeeds can be foreseen in advance. For decades, police departments have used psychics to track missing children and ascertain the whereabouts of perpetrators of unsolved crimes. Pat Price, one of the best remote viewers in the US government program, began by doing such work.¹¹⁸ If abilities of this kind are further refined and rendered more reliable, would we have the right to use them to arrest a violent criminal before he commits his crime? What kind of horrifying police state would that lead to?

Robert Jahn chose an apt title for the book summarizing his research at Princeton, one that could be applied to psychic phenomena in general: these marginalized phenomena will force us to redefine our ‘reality’ – not just ontologically, but *socio-politically*. Jahn was an aerospace engineer. It is a trade secret that the mental state of pilots under high stress conditions can directly interfere with sensitive electronic components in their cockpits, so that in order to avoid accidents that have occurred due to such malfunctions massive redundancy has been built into these systems.¹¹⁹ If the mind has an ability to manipulate the circuitry of a machine it should be no surprise that it can even more readily interact with the brain, nervous system, and other bodily organs and functions of living systems, including human beings.¹²⁰ Psychic healers use this DMILS ability to counteract diseases and promote recovery from injuries, but naturally it can also be used to the opposite effect.

The Soviet Union had a small program dedicated to the ‘remote influencing’ of targeted individuals in order to make them very ill or worse, and I have cited Lyn Buchanan to the effect that the US briefly flirted with reciprocating by tasking some of its psychic spies to do the same.¹²¹ There were also successful attempts made to plant foreign suggestions in the minds of targets in order to elicit behavior that would be self-

destructive. Some adepts of psychokinesis are able to, often inadvertently, start fires by affecting electronic appliances or their power outlets.¹²² So-called ‘poltergeist’ phenomena have been interpreted by some parapsychologists as large-scale manifestations by individuals unaware of their own psychokinetic abilities, on a par with the more deliberate table tipping and remote manipulation of objects by a few of the genuine 19th century parlor mediums whose performances were subjected to rigorous scientific controls.¹²³ It is possible that a corporate organization would train a cadre of operatives highly skilled in psychokinesis for the purposes of murderous private gain. If psychokinesis were to receive mainstream scientific validation, some more contemporary variation on “the devil made me do it” might have to be accepted as a defense plea in a court of law.

Research on the margins of ‘reality’ leaves us with some revolutionary questions. Are we ready to live in a world where our thoughts, intentions, desires, and emotions are always open to perfect strangers? Can we bear to know that we may be under observation while doing anything, anywhere, at any time? How much of our future could we tolerate knowing in advance without breaking under the burden of trying to change it, over and over again? Do we really want to be able to see everything in the past of those near and dear to us? Would we be willing to witness the total disintegration of an economic system based on proprietary knowledge, and to be accordingly divested of our private property? What about losing control not only of things but also of our ‘own’ bodies, which may be subject to the distant psychological influence of others?

So-called ‘postmodern’ thinkers have for the most part been as unconsciously terrified over opening the floodgates of spectral phenomena as any other intellectuals. While advocates of deconstruction have occasionally engaged in critical examinations of the thought of Rene Descartes and Immanuel Kant, no one has shown how both of these defining thinkers of the modern age built their rational systems on a terrified suppression of the spectral. This is not simply an epistemological oversight; it has grave ethical implications. As I will show in the following chapter, Descartes was effectively an inquisitor in league with the most viciously conservative religious forces of his time and Kant argued for the suppression of phenomena that he knew to be genuine and even

advocated the institutionalization of those with paranormal abilities on account of his fear that serious study of the “occult” threatened the transcendental sanctity of religious faith.

These men were instrumental in constructing a crippled kind of science that, for all its apparent technical power, was intended to leave everything having to do with “the soul” in the domain of conservative religious faith in the dogmas of Abrahamic revelation. The truce that they negotiated between Science and Religion ended the burning of witches, but it also forestalled the revolutionary promise of Witchcraft and Renaissance Alchemy – which could have extricated us from Christian Medievalism in a very different way. Instead, they turned the human mind into something less than a ghost and imprisoned it in a machine, no, in a mere cog of celestial clockwork that exorcises it of any creative force. The Reason of the so-called Enlightenment is synonymous with its sadistic Terror, and, as we shall see, it was crafted as a chainmail to armor crusaders for a battle with specters.

Chapter 2. Reason and Terror

Paris. November 10, 1793. In a ransacked Notre Dame Cathedral, whose religious images and statues have been defaced, whose holy scriptures have been removed and publically consigned to flames, a new altar to Liberty is installed over the old altar of the Lord. The Goddess of Reason, as portrayed by a living woman, takes her place atop this elevated platform amidst licentious celebrations by the assembled crowd. The façade of the medieval cathedral is inscribed with the words “To Philosophy.” Centuries of Monarchy had been dispensed with in Year I with the guillotining of Louis XVI, and now millennia of Religion would be blotted out in Year II. In the coming days and weeks, the “lurid” and “depraved” ceremonies at Notre Dame were mandatorily repeated at churches throughout France, many of which were marked with the inscription “Temple of Reason and of Philosophy.” All crosses and religious statues were removed from graveyards, and many religious monuments were destroyed. Not only were all institutions of religious education shut down, individuals were banned from performing public *and even private* acts of worship. Catholic priests were forced to marry, and those who resisted being defrocked were packed into boats and drowned in the Seine. This cosmic upheaval was the work of the *Cult of Reason* – a group of uncompromising French revolutionaries who were dedicated to realizing the most radical vision of the Enlightenment: *the establishment of a scientific society, wherein Religion is not merely tolerated but is supplanted by Science.*

The four leading proponents of the Cult of Reason were Antoine-François Mormo, Jacques Hébert, Pierre Gaspard Chaumette, and Joseph Fouché. Ironically, the most violent of the four leaders of the Cult of Reason was the only one to survive the duration of the year and go on to have a career after the Revolution. Fouché was appointed Minister of Police under Napoleon Bonaparte. In March of 1794, within *only four months* of the Festival of Reason, Mormo, Hébert, and Chaumette were all guillotined. They were victims of a reactionary movement against the Cult of Reason,

mobilized by the Jacobin leader Maximilien Robespierre. Fearing that the Cult of Reason was overreaching in its attempt to eradicate religion and found an atheistic scientific society, Robespierre wanted to consolidate and preserve the political successes of the Revolution “in the name of God.” On the 7th of June, 1794, Robespierre crystallized the reactionary movement that martyred Mormo and the other rationalists into a *Cult of the Supreme Being* that was intended to supplant their Cult of Reason. Robespierre himself was guillotined less than two months after establishing his republican religion. Celebrations that had involved him descending from the top of an artificial mountain, like Moses at Sinai, and rumors spread by a superstitious woman in his close company that he was the messianic herald of the New Dawn, were too much for both traditional Christians and the atheistic rationalists he had persecuted along with them. Robespierre was the only person to be guillotined face up, in a particularly gruesome scene. To prepare his neck, the executioner tore off a bandage holding together a jaw shattered during his stay in prison. This left Robespierre screaming all the while the blade fell from the tall scaffold.

Within five years, General Napoleon Bonaparte staged his coup d’état against the republican government, declaring: “I *am* the Revolution.” In another five years, he went from being First Consul for Life to becoming an outright Emperor who restored monarchy in France and negotiated a settlement with the Church that would establish Catholicism as the official religion of his French Empire. In other words, to make a very long story short, the reactionary Deist movement led by Robespierre not only failed to supplant traditional faith in religious revelation, it destroyed the atheistic rationalists whose uncompromising advocacy of a scientific society might have prevented the demise of the French Revolution in a restoration of the old Catholic political order.

In some ways, Robespierre understood the rationalist revolutionaries better than they understood themselves. Men like Mormo, Hébert, and Chaumette were *philosophes* or public intellectuals, not philosophers. Robespierre was probably familiar with the work of the real early modern materialist philosophers upon which their populist rationalism was loosely based. Foremost among these were Julien Offray de La Mettrie and the Marquis de Sade. The Marquis de Sade lived to see the French Revolution and was an advocate of the Cult of Reason. *Philosophy in the Boudoir* (1795) was written and published at a time when de Sade fell victim to Robespierre’s cult of virtue and was

locked up in Charenton mental asylum.

De Sade takes direct aim at Robespierre in a long mock political pamphlet that he inserts between the fifth and sixth chapters of *Philosophy in the Boudoir*, entitled “Yet Another Effort, Frenchmen, If You Would Become Republicans.”¹ Here de Sade uses both satire and logic to deconstruct the rationale for laws against theft, sodomy, rape, incest, infanticide, and even murder. The pamphlet shares some arguments in common with socialistic anarchist writings, such as the argument that theft is justified by the inequalities of a society with private property or that laws against murder are incoherent in light of state mandated warfare. The text contains, repeatedly, a prescient warning that if theistic Religion is not overthrown together with Monarchy, superstitious faith in a heavenly tyrant will keep alive the psychology of slavish submission in the populace, who will ultimately be manipulated into accepting the return of monarchy in an even more despotic form. Emperor Napoleon I, who proved him right, had de Sade’s books rounded up and burned.

De Sade was no anomaly. Theodor Adorno and Jacques Lacan both view him as the epitome of the Enlightenment rationalism usually associated with Immanuel Kant, but in order to understand why that is the case we need to know something about La Mettrie and, more importantly, we have to understand the Cartesian paradigm within the context of which his mechanistic materialism took shape. Only then can we see how de Sade is also a Cartesian. In what follows, I present Julien Offray de La Mettrie as the link between Descartes and Sade, who unveils the psychotically sadistic essence of Cartesian metaphysics. As compared to Sade, the rest of the Reason cultists were naïve Cartesians. Robespierre, who had Sade committed, and Napoleon, who ordered his works to be incinerated, were both aware of this fact, which no doubt motivated their resistance to the rising Cult of Reason.

Descartes developed a thoroughgoing mechanistic model of the human body, of animals, and of nature in general. He viewed natural beings as automata, whose movements could in principle be calculated with mathematical precision. The only exception to this was the human mind, which Descartes argued was substantially distinct from material bodies subject to mechanistic physical laws. Extension and the possibility of sub-division into smaller parts is the common denominator of material entities,

whereas Consciousness is un-extended and indivisible. The qualitative change observed in material entities is an epiphenomenon, or derivative manifestation, of changes in their particular elementary constituents, while Consciousness lacks any quality whatsoever. In this way, Descartes distinguished Mind and Matter as completely different substances. Yet this left him with two very serious problems. The consciousness of one's existence is the most irrefutable demonstration that one at least *is* something, but how can this self now identified with a Mind devoid of quality and extension be sure that the world that it perceives is the *real* world and that it is not being deceived, for example, by a cosmic trickster systematically deranging the senses and one's logical judgments? Furthermore, even if the objective reality of the subject's now 'external' world were to be secured, how is it possible for a Mind substantially distinct from Matter to move or in any way interact with physical bodies, including the organs and limbs of one's own body? Careful attention to the way in which Descartes grapples with these two problems betrays a concern on his part to deem various types of spectral occurrences impossible.

Nearly every one of the proscribed modalities of mind-body interaction are one or another class of paranormal phenomena. The most striking of these passages is one where Descartes claims that if a man were to suddenly appear from out of nowhere and then disappear before one's eyes one would have to conclude that he were a "ghost" and not a "*real* man", and then he goes on to clarify that what he means by this is that the apparition was a delusion or derangement of the senses. The ghostly or spectral is contrasted with the *real* because it violates the binary opposition between perfect Being and absolute Nothingness. The *spectral* quality that characterizes the paranormal in general bespeaks an essential imperfection of being and a kind of non-being that is not reducible to nothing. It is indicative of an emptiness of inherent existence that renders all beings 'fundamentally' interdependent insofar as they each lack any foundation. Fearful suppression of this abyssal background leads to violent psychosis.

When the Marquis de Sade adopted the mechanistic world model of Descartes he only thought that, like La Mettrie before him, he had exorcised the machine of the ghostly mind by explaining it in mechanical terms as well. The truth is that the vitriolic antipathy to compassion and the advocacy of cruelty in his writings attests to the persistence of a Consciousness now helplessly horrified by being trapped in a machine.

We are confronted with a mind that thinks it has no free will and that its body is a complex cog in the wheelwork of an amoral and murderous Nature, so that in order to stop itself from going completely mad by empathizing with everything that suffers at the hands of the machine of which it is an inseparable part, it makes the one ‘choice’ that does seem left to it – namely to *affirm* the cruelty of Nature as one’s own will, as *the* will. This only appears to be a materialist vision of the world. Really, it is the hyperconscious Cartesian *cogito* once again, faced with the ultimate consequence of a model of the world that has turned its body and all others into a machine and evacuated its mind of qualities, of a dwelling place, and of an effective will that it may exercise to act responsibly. Once this is seen as the ultimate consequence of the core structure of the Cartesian paradigm in all of its variants, including not only materialism but as will be addressed momentarily, also Kantian transcendental idealism, it is not difficult to understand why so many people who saw it as synonymous with Rationalism would be driven to irrationally reaffirm revealed religion as a sturdier ground for social and political order. Enter Bonaparte.

That this reactionary conservatism was increasingly seen as the only alternative to the thinly veiled sadism of the Age of Reason presupposed the eradication of a third way that characterized the Italian Renaissance: a naturalistic spirituality that drew no ultimate distinction between Mind and Matter and that acknowledged all of the various phenomena expressive of this spectral non-distinction. What confirms my reading of Descartes as consciously suppressing the paranormal in the construction of the mechanistic model that bears his name, is that Cartesius was apparently a secret agent of the Holy Inquisition dedicated to infiltrating and exterminating the heretical occult organizations that arose during the Renaissance, above all the Rosicrucian Order. I make this argument on the basis of recently discovered biographical material that has been brought together by A.C. Grayling in his excellent scholarly study of Descartes’ life.

Cartesius is not the only inquisitorial exorcist who has been taken for a standard-bearer of soberly ‘enlightened’ rationality. As it happens, a torturous relationship with the occult also marked the life of the other modern philosopher who most influenced the ‘Enlightenment’ both metaphysically and politically, and who developed a sophisticated refinement of the Cartesian paradigm: Immanuel Kant. A denial of spectral phenomena constitutes the specific “limits of possible experience” set by Kant in his attempt to

equate mathematical laws of Physics with laws of consciousness. One can reach no other conclusion when reading *Religion Within the Limits of Reason Alone*, where Kant rants against practitioners of occult arts for attempting to “storm heaven.” He claims that the abilities they pretend to have would cause as much disorder in “the whole rational and contemplative commonwealth” as criminal acts of terrorism would in the political commonwealth. Elsewhere, he makes remarks that show this to be no idle analogy. Kant supports the forced hospitalization and purgative ‘treatment’ of those alleging to have uncanny abilities. This would be less disturbing if he knew little or nothing about the occult, but as it turns out in his youth Kant undertook a study of the complete works of Emmanuel Swedenborg – the leading occultist of the day. Swedenborg’s work was widely condemned as heretical and liberal theologians partial to it were even put on trial.

When rumors spread that Kant was spending his time and money seriously investigating Swedenborg’s claims, and that he had validated some of them, the young aspiring academic came to believe that he was in danger of being denied a tenured professorship. He responded by writing a very strange little book on Swedenborg entitled *Dreams of a Spirit Seer*. This text is an example of what Leo Strauss called “esoteric writing.” I show how, although the tone was meant to be mocking of Swedenborg and his claims, at numerous points the content conflicts with the sarcasm and irony of his style. Kant intended the casual reader not to see past this rhetorical veil. This worked and secured him tenure. A closer reading of the text, however, demonstrates that Kant not only took Swedenborg seriously, but that in this obscure book, through a constructive critique of Swedenborg, Kant develops basic structures of his metaphysical and ethical position in later key texts such as *The Groundwork of the Metaphysics of Morals*. This becomes especially clear when one looks at *Dreams* and the *Groundwork* in light of the suppressed third part of Kant’s *Natural History and Theory of the Heavens*, which contains a Swedenborgian account of intelligent life on other worlds throughout the “spiritual republic” that pervades the Cosmos.

The way in which Kant interprets Swedenborg’s experiences in *Dreams of a Spirit Seer* is aimed at denying the spiritual world of any phenomenal qualities and interpreting the paranormal phenomena experienced by Swedenborg and others as the mind’s sensory translations of telepathic impressions from disembodied spirits on “the

other side.” Kant tries to explain away the phantasmagoric quality of the paranormal as a gross distortion of extrasensory perceptions of what he would later call the noumenal realm, distortions produced by our own senses in accordance with symbols of significance to us and drawn from our own memories and prejudicial beliefs. This allows him to turn the noumenal realm into a domain of perfect justice, where all of one’s moral acts in this life have the effects that they cannot have in this phenomenal world that is as mechanistically determined by mathematical laws as Descartes took it to be. As he writes in the *Critique of Pure Reason*, knowledge of the noumenal realm is denied in order “to make room for faith” that it is constituted as he takes it to be in *Dreams*.

2.1 Materialistic Rationalism and Cartesian Solipsism

Rene Descartes laid the foundation of the modern scientific paradigm. In Descartes’ ontology there are two substances: *res cogitans* and *res extensa*, or Mind and Body. Descartes first develops the conception of *res extensa*, or spatially extended thinghood in the famous section on the melting wax in the *Meditations on First Philosophy*. In the Second Meditation² Descartes notes that a piece of wax, which has one set of phenomenal *qualities* when it is cool and hard, radically changes its shape, texture, color, and even smell, when it is melted by a hot flame. What remains the same in this transformation of the thing, namely its *extensional* quantities of size, shape and motion, confers upon it its *res*, its reality, and becomes the *sub-stance* of the thing for Descartes. In things, that which enduringly remains, and consequently is *real* – namely the Being of beings – can only be accessed through mathematics. The spatiality of the world thus becomes an undifferentiated geometrical extension that ultimately disregards the phenomenal qualities of differentiated things.

Mind is, in turn, defined against this *res extensa*, as that which has absolutely no extension whatsoever, and which cannot be divided up or broken down – i.e. *res cogitans* – an extensionless “thinking thing”, a *theoretical* observer of an extended, conquerable, Natural world *substantially* distinct from it. Descartes explicitly states that by “thinking” (*cogitare*) having thoughts is not all that he means. Rather, cogitation in the most general sense is the primary attribute of the Mind as such, and intuition, memory, imagination and even sense perception are all modes of it. This is so because I can exist though I am

not using any given one of these modes, but I cannot exist if I am not using at least one of them. Therefore the modes inhere in what Descartes will call “Thought” as such, which is the defining quality of Mind.³ So just as Extension is the primary attribute of Body, and Extension’s modes are shape, size, and motion, Thought is the primary attribute of Mind, and Thought’s modes are intuition, volition, sensation, imagination, and recollection. According to this schematic, Descartes prohibits thought from being a mode of extension, or extension from being a mode of thought, *because* each substance is defined by only one primary attribute.⁴ Descartes claims that a given substance is nothing more than its defining primary attribute.⁵

In his *Discourse on the Method* Descartes treats the bodies of animals, including apes, as no more than sophisticated machines whose function is analogous to that of a wound up clock and whose dysfunction or death may be compared to a broken piece of clockwork.⁶ While he maintains that God is the craftsman of such machinery, he suggests that this is only true in a remote sense. Descartes describes a section of his treatise *The World*, where he claims to have hypothetically demonstrated how the universe could have begun as a primordial chaos and then only gradually resolved itself into its present form in accordance with certain “natural laws” (which he claims to have discovered) that even God could not violate. The role of God would then be merely to give his “concurrence” to the evolution of the universe. The sole reason that Descartes gives for not explaining man in the proto-Darwinian terms in which he describes the formation of inanimate bodies and (perhaps also) animals, is that he “did not *yet* have sufficient knowledge” of them in order to do this, and so he “contented” himself to say that God crafted man out of matter in his present form from the start.⁷ Thus it is clear that this is a merely provisional explanation and that Descartes is almost ready to accept the development of man’s body in proto-Darwinian terms, *except* that man’s defining rationality would not be part of this evolution of material machinery.

In this connection, we should note that Descartes completed his studies at La Flèche in the summer of 1614 and there is no public record of his activities thereafter until November of 1616, when he graduated from the University of Poitiers with a degree in civil and cannon law.⁸ There has been much speculation about Descartes’ activities or lack thereof, between his quitting La Flèche and the beginning of his studies at Poitiers.

The biographer A.C. Grayling suggests that even if he did have a nervous breakdown, as some scholars have claimed, *where* he was during the course of this breakdown is quite significant.⁹ It appears that Descartes was at Saint-Germain-en-Lay, a small village on the outskirts of Paris, whose sole attraction at that time was a royal pleasure garden designed by the Francini brothers, which featured a vast array of performing mechanical automata of animals and humans, some of which even “spoke” using hydraulic mechanisms. These robots were set within a labyrinthine garden containing mysterious passages to grottos fit for secluded contemplation.¹⁰ One can imagine what an effect this would have had on a thinker undergoing a mental breakdown.

Julien Offray de La Mettrie studied philosophy and natural science at the College d’Harcourt, where Cartesianism was dominant. Like many natural scientists after him, La Mettrie found the dualism of Cartesian metaphysics incoherent but he adopted Descartes’ view of animals as *automata*. Through studies in medicine (under one of the most renowned physicians of the age) he extended this mechanical model to human beings. Like Descartes, he preferred bloodying his hands with dissections and autopsies to scholasticism. He also shared Descartes’ penchant for being the subject of his own research. During a fever La Mettrie conducted experiments on himself concerning the effect of quickened blood circulation on mental processes. He was ultimately convinced that Descartes had been mistaken to think that there was an immaterial and un-extended mental substance distinct from the brain and the nervous and circulatory systems that allow it to function. Working with a proto-evolutionary notion that (as noted above) one also sees at least tacitly in Descartes’ *Discourse on the Method*, La Mettrie observed that the transition between animals and man is one of degree of complexity and not a violent break in nature.

If, as Descartes rightly observed, animals are machines then men are also. La Mettrie set out these views in *Man a Machine* (1747) and a year later he put out a more biologically oriented work, *Man a Plant*.¹¹ He went on to extrapolate a purely hedonistic ethics from out of this biologicistic materialism. La Mettrie’s psychological and ethical work criticized the enculturation of feelings of guilt into children at a young age, and advocated the pursuit of sensual pleasure without restraint above all else. It was this hedonistic libertinism, more than his materialistic mechanism that caused him to fall

afoul of even other figures of the French Enlightenment, such as Voltaire and Diderot, let alone the establishment. He was forced to take refuge with Frederick the Great in Prussia.

Marquis de Sade studied the scientific works of La Mettrie. In his most concisely representative philosophical work, *Philosophy in the Boudoir*, de Sade adopts the rationalistic mechanism of La Mettrie and extends his licentious hedonism to its logical conclusion.¹² In De Sade's view, the indistinctness of emotion, to which irrational religion appeals, consists of flaws in rational thinking under conditions of malaise and weariness. In good health, a sharply tuned mind should burn with incandescently clear discernment of the nature of things and the impulses to which it is necessarily subject. A mind that carefully studies the laws of physics at work in nature, will come to recognize that it is utterly subject to biological processes such as the function of "our organs, our metabolism, the flow of liquids, the energy of the animal spirits."¹³ It is these "physical causes" that are responsible for all of our behavior.

According to de Sade, an honest view of Nature is one that acknowledges that cruel pleasure and excitation at the pain of others is as natural in human beings as in animals such as cats who torture mice. In support of this claim de Sade takes recourse to the observation of infants and (highly dubious) early anthropological studies of various non-European cultures, especially "savage" ones. He views civilization, which arises on account of the more delicate brain capacities of humans, as providing only an avenue to the sublime refinement of cruelty. Furthermore, creative and destructive processes are totally interdependent in Nature. Man is simply one agent of destruction among others. There is no such thing as a "criminal" in Nature's eyes, only fortunate and unfortunate men. De Sade does admit that criminal laws are necessary for society to function. However, he thinks it impossible to fashion a body of laws that, by definition as *laws* (rather than tyrannical caprice), would be designed for *universal applicability* and yet would somehow resolve the conflict between the personal interest of the individual and the general interest of society. We should be "as wary of" laws as "of snakes, which, although they wound or kill, can sometimes prove useful to medicine."¹⁴

Mass murder is on a par with other natural catastrophes, such as famines, plagues, and earthquakes. If those acts considered immoral or impious were truly criminal, they would be impossible. If it existed, such a thing as "natural virtue" would be as

inescapable as the laws of physics: “Nature does not have two voices, one forever condemning what the other demands.”¹⁵ The very idea of an “unnatural pleasure” is a contradiction in terms. On the basis of wet dreams and the relatively brief periods of female fertility, de Sade argues that sodomy cannot be condemned on the grounds that it wastes sperm. He naturalizes homosexuality, viewing both sodomy and lesbianism as a population control mechanism built into Nature. Emphasizing the relative insignificance of mankind in the Cosmos, and pointing to the paleontological record of prior extinctions, de Sade claims that Nature would only respond to the total destruction of mankind by engendering some new, and perhaps superior species in its place: “Do you not think races have already become extinct? Does Buffon not already list several? Nature fails to even blink. If we were all destroyed, it would not affect the purity of the air, the brilliance of the stars, nor the remorseless march of the universe.”¹⁶ What then, is *one* human being? He compares aborting a fetus, merely one “form of *matter*,” to using medical purgatives or even “common shitting.”¹⁷

An individual human being is nothing worthy of any consideration other than as an “object to use”, unless, of course, that individual is oneself. De Sade’s advocacy of excitedly taking pleasure in the pain of others is not only based on the claim that pain is, in a biomechanical sense, a greater stimulant – even to the one *witnessing* it – than simple pleasure. This, in itself, would not rule out empathetic identification with others whom one witnesses in a state of pain. Rather, de Sade needs to uphold a thesis that we are not only naturally predisposed to seek our own pleasure, but that this pursuit is radically egoistic. We are totally closed off to the ‘inner’ feelings of others: “...there can be no comparison between our experiences and those of others... we should prefer...this minor excitation [at another’s pain] which arouses us, to the massive sum of other’s miseries, which have no effect on us.”¹⁸ He claims that when looked at “rationally” the “source of all our moral errors is that ludicrous notion of brotherhood” he deems an invention of Christians who were too weak and vulnerable to simply seize what gave them pleasure. These “moral errors” allegedly include the “virtues of humanity, charity, generosity.”¹⁹

De Sade’s attempt to follow the materialist rationalism of the French Enlightenment through to its logical conclusion ends up in a *reductio ad absurdum*. He must be praised above La Mettrie, let alone the materialist *philosophes* who set up the

revolutionary Cult of Reason, if only for having had the courage to go far enough for us to be able to see this. De Sade claims that it is impossible to do anything contrary to the laws of nature, that in effect, we do not act at all; our so-called ‘individual will’ is a chimera that expresses Nature’s “plan.” Yet at the same time he claims that we should actively reject such values as humanity, charity, and generosity, and that we should forsake compassion in favor of stimulating ourselves through contrived situations wherein cruelly torturing others is refined into a science. This would be in accord with Nature’s “plan”, which manifestly includes destructive natural catastrophes and the cruelty of animals, children, and “uncorrupted savages.” Is it not patently obvious that a Nature so indifferent, would also not be violated by our treating others caringly and graciously – that in the face of Nature’s indifference, it is *we* who choose *to act* in one way or the other? No, this is not acceptable to de Sade because, as La Mettrie before him believed, it would be irrational for us to have a *chance* to act. All things are determined. Above all, it must be the case that Nature has a “plan”, and to be rational is to use one’s reason to discern this plan and then to act in “harmony” with it. But is it not the case that, as de Sade repeats incessantly, we *always* act according to Nature? Do you see the absurdity, the tautological closed circularity of this ‘Reason’?

The sadist is not a *natural* man, he is the hyperconscious product of a decadent civilization where a false ideal of Reason whose mathematical standard of certitude Descartes most eloquently elaborated, has hollowed out everything of *human* significance and turned *everyone* into an object to be formulaically manipulated. He is a Cartesian ego who, unconvinced by the ‘proof’ of God’s existence, is plunged back into solipsistic doubt as to the existence of others in an ‘external’ world whose reality as a whole is also brought into question. The nihilistic *ennui* that seems to motivate the sadist’s need for excitation through cruelty to others, is really a psychological barrier against the terrifying situation he would find himself in if his so-called ‘rational’ views on the laws of nature turned out to be true. To empathize with others, to recognize their feelings, would be to still be capable of feeling something other than artificially abstracted sensations. It would be to suffer and cause suffering while knowing that, in a world where the laws of nature preclude any margin of free will, one cannot act to better one’s own situation or anyone else’s. That is like being a knife in the hands of a butcher. Any *human* being would be

driven to madness by honestly thinking all the way through materialistic rationalism, so the sadist dehumanizes himself into a more desperate creature than any animal.

2.2 Mind and Matter in the Mirror of Being and Nothingness

To be self-conscious, to know as Descartes did that one *is* one's mind – it is impossible for someone who has had this realization to live as if he were “an insect” in a well-ordered “anthill”, which is the kind of ‘scientific’ society that the Cult of Reason aimed at. The materialists were right that Descartes’ dualism is untenable, but they were unable to eliminate Consciousness – only evoke in it a sense of being trapped that leads straight into the madhouse of reactionary religious faith. This claustrophobia of the Cartesian ego can ultimately be diagnosed as a symptom of the incoherent abstraction of mind and matter from the stream of experience, and their opposition to one another as mutually exclusive substances. As a consequence of his separation of Mind and Matter, Descartes is faced with the seemingly unsolvable problem of how the former can affect the latter (and be affected by it), given that they are *substantially* different. This issue is first seriously raised by his friend and student, Princess Elizabeth Stuart of Bohemia, in a series of correspondences from May 16 to July 1 of 1643, and is never satisfactorily resolved before Descartes falls terminally ill and dies of pneumonia in 1650. The Achilles heel of the Cartesian paradigm lies exposed in these letters.²⁰

In her first letter, dated May 16, Elizabeth asks Descartes how it could be that the immaterial soul voluntarily moves the material body? She reminds Descartes that according to his own physics: one body is only moved by another based on the momentum, trajectory and surface shape of the other body impacting it; and that his description of the soul as an immaterial substance excludes extension of any kind (i.e., shape or surface area) and consequently forbids a conception of the soul as some kind of ethereal ‘subtle body’. Descartes replies on the 21st of May, with a startling confession:

I can truthfully say that the question asked by Your Highness seems to me to be *the one* that can most justifiably be put to me as a result of the writings I published. For there are two things about the human soul on which depends all the knowledge we can acquire about its nature: one is that it thinks and the other is that, since it is united with the body, it can act and be acted on in conjunction with the body. *I have said almost*

nothing about the second of these, and I tried to provide a good explanation only of the first one because my main aim was to prove the distinction between the soul and the body; only the first feature could help us in this, whereas *the second one would not have been helpful*. But since *Your Highness sees things so clearly that no one can conceal anything from you*, I will now try to explain how I conceive the union of the soul with the body and how the soul has the power to move the body. [My emphasis.]

The implication here is that in his *Metaphysics* Descartes was less than honest in the manner in which he established the certainty of the division between intelligent and corporeal substance. When Descartes admits that he has said “almost nothing” about their interaction, he is referring to the one instance in the Sixth Meditation where he writes:

Nature also teaches me, by these sensations of pain, hunger, thirst and so on, that I am not merely present in my body as a sailor is present in a ship, but that I am very closely joined and, as it were, intermingled with it, so that I and the body form a unit. If this were not so, I, who am nothing but a thinking thing, would not feel pain when the body was hurt, but would perceive the damage purely by the intellect, just as a sailor perceives by sight if anything in his ship is broken. Similarly, when the body needed food or drink, I should have an explicit understanding of the fact, instead of having confused sensations of hunger and thirst. For these sensations of hunger, thirst, pain and so on are nothing but confused modes of thinking which arise from *the union and, as it were, intermingling of the mind with the body*. [My emphasis.]²¹

To isolate Mind from the body, and from Matter in general, Descartes needed to suppress the question of the interaction or locus of conjunction of the two supposedly distinct substances. The excerpt from the Sixth Meditation above suggests that this is not because he failed to conceive of the “union and...intermingling” of a mind and body that must in some way be self same, but because he chose to suppress it in order to fulfill his stated “main aim” of proving their distinction. In other words, he establishes them as distinct substances by *taking* them to be distinct substances. Clever student as she is, Elizabeth does not fall for this. She realizes that: *If* (according to the definition Descartes gives) the Mind is the true nature of the Self and is capable of existence separate from the body; *and* in separation from this body the Self as Mind would not be capable of any sensory perception (or imagination) but only pure logical or mathematical understanding and

intuition;²² then it follows that *the soul must be inside the body as if inside a vessel, whose organs it uses as tools, but with which it is not “intermingled” in any way.* Yet this is a conclusion that Descartes himself denies as inconsistent with the actual experience of the interaction of mind and body.

Elizabeth’s objection would not be so scandalous for Descartes’ metaphysics if he had gone on to satisfy her with the explanation he promises of the manner of interaction of the soul and body, and how the former is able to move the latter when they have essentially different and mutually exclusive natures. However, in the next five letters exchanged back and forth Descartes is never forthcoming with such an explanation despite his keen student’s persistent inquiry. Instead he insists that the nature of the soul and the body must be known each in their own right, that they must be considered separately, and not explained in terms of one another. He also suggests that their union would have to be explained in a manner different from either the way the soul is explained or the way the body is explained, but he never ventures this third explanation.

Descartes does at one point give Elizabeth a straight answer about his difficulties in reunifying the Mind and Body once he has severed them. The problem is that instead of stopping here, he goes on to attempt to avoid fundamentally engaging her question, at times by reformulating it in less threatening terms. We should not allow this subsequent intellectual squirming to distract us from what he does say, very clearly, in his reply of June 28th:

... these meditations were responsible for making you find obscure the notion we have of the union of mind and body, because it seemed to me that the human mind is incapable of conceiving very distinctly, and simultaneously, both the distinction and union of body and soul. The reason is that, in order to do so, it would be necessary to conceive of them as one single thing and, at the same time, to conceive of them as two things – which is self-contradictory.

Apparently, Princess Elizabeth does not see Descartes as having said anything of substance beyond the admission of failure in this statement when, on July 1st, she writes in conclusion to their correspondence over this unanswered question:

I also find that my senses show me that the mind moves the body but they do not teach me (any more than the understanding, or the imagination) the way in which it happens. To explain that, I think there are properties in the soul that are unknown to us and that might perhaps overturn what your *Metaphysical Meditations* convinced me of, with such sound reasons, about the extension of the soul.

In his *Discourse on the Method* Descartes refers to a most controversial section of his suppressed magnum opus – *The World* – that was subsequently destroyed. Here, he had allegedly described how God created man’s rational soul and joined it to the body in a very precise manner so that it would affect the latter and could be affected *by* it, and yet remain substantially different so as to be able to survive the death of the body and enter immortal life.²³ This means that for Descartes the union of body and soul ultimately depends on an act of God, in a word, on a miracle. Princess Elizabeth’s objections become Descartes’ chief motivation for readdressing this issue in the *Passions of the Soul*. However, in this final work, though he paints a picture of how the pineal gland in the brain interacts with the body’s muscles and organs by directing the flow of ‘animal spirits’ through the nervous system, he never explains how it is that the immaterial soul “has its seat” in this material organ in such a way as to affect it and thereby affect the body. It seems that this remains an act of God. Nevertheless, in the *Passions*, Descartes makes the mental modes of sensation, imagination and recollection dependent on interaction with the body through this gland, and consequently violates the mutual exclusivity of primary attributes and their modes that he claims defines substances as “really distinct.”²⁴

The interdependence of mental and physical modes suggests some sensory entity that would not be as abstractly un-extended as the notion of mind that Descartes would like to limit himself to affirming. It would suggest a *spectral* or *ghostly* entity as the intermediary between pure matter and pure mind. However, as we shall see, Descartes explicitly rules out the possibility of such a phantom body and of all of the extrasensory perceptual and psychokinetic capacities traditionally associated with it. In order to uphold his ontology of Real (Objective) Existence as the substrate of beings, Descartes damns all examples of phenomena of this kind.

Descartes argues that I see other bodies including my own, but this one is mine because though I can exist without it, I cannot exist within or sense the world through any other bodies.²⁵ This rules out strong Telepathy and Possession. Furthermore, according to Descartes, though the Mind has certain passive faculties of sense perception, if it were not for the active faculties of the body's sensory organs I would only apprehend mathematical and logical ideas and not the physical world (that has now been proven to be) outside of my mind.²⁶ This rules out Clairvoyance and other Out-of-Body (sensory) Experience. The Mind, he says, should not be imagined as an ethereal 'subtle body' of some kind.²⁷ This rules out phantom apparitions. Also, Descartes claims that now that we know there is a real world of waking experience we can better distinguish this from the illusions of our dreams. In dreams one experiences strange things but on examination the events of dreams cannot be fit neatly into what happened before and after them and they lack a sensible environmental context, considering this we will realize that we are dreaming. If a similar spooky experience occurs while we are awake, for example if something were to appear as if from out of nowhere (following from nothing before it nor in its context) and then vanish before our eyes, and we confirm to our satisfaction that we are not dreaming, we can be sure that we were deceived by our senses. In the Sixth Meditation, Descartes writes: "If, while I am awake, anyone were suddenly to appear to me and then disappear immediately, as happens in sleep, so that I could not see where he had come from or where he had gone to, it would not be unreasonable for me to judge that he was *a ghost*, or [in other words] a vision created in my brain like those formed in the brain when I sleep, *rather than a real man*."²⁸

The repression of the *specter* that could mediate between Mind and Matter haunts Descartes' metaphysics as that which at once *is* and yet *is not* 'real' and thereby disallows a binary opposition of "(Perfect) Existence" and "Nothingness". Descartes depends above all on just such a binary opposition as he lays the groundwork of the modern scientific paradigm in his *Discourse on the Method* and his *Metaphysical Meditations*. The substantial distinction between *res cogitans* and *res extensa* in Descartes' metaphysics is inextricable from his treatment of God as "Perfect Existence" and his related conception of "Nothingness". What follows is a reconstruction of this move.

After entering into an all-encompassing skepticism methodologically aimed at discovering truly indubitable grounds for science, Descartes suggests that we arrive at the realization of God's existence in the following way. Standing on the solid ground of my own indubitable existence as the doubter, I may now see if there is a way to attain certain knowledge concerning any of what was previously placed in doubt. I consider the ideas I have of earth, fire, water, the sky, the stars and all of the beings of the world of my senses and see that nothing in them guarantees that they do not have their origin in my own mind, or in the mind of a postulated cosmic deceiver who is one of the prime catalysts of radical doubt.²⁹ Since deception is a product of either malice or weakness, and both of these are imperfections, all of my imperfect ideas are in doubt as to whether they refer to anything 'real' at all.

However, I notice that I, a manifestly imperfect being, have what seems to be an idea of perfection! If I derive my existence only from my own consciousness I would have to have obtained my idea of perfection from my own potential, but not fully actualized, perfection. Yet even if I could become progressively more perfect, something potential is strictly speaking, something *that is not* and true perfection cannot come to be on the basis of this, but only on the basis of that which *is* perfect. If I myself were perfect in this way I could *substantiate* the real existence of a world corresponding to the ideas my mind has of my body and of other bodies, *but* I should also in the same stroke be able to grant myself all of the perfections that it seems I am lacking. Not only would I be able to will myself to be free of doubt, I should even be able to grant myself true omnipotence and omniscience, so that in effect I myself would be God. Descartes argues that since I cannot do this, my idea of perfection must come from a being other than myself.³⁰

I have the idea of "God" as an omniscient and omnipotent, hence indivisible, infinite being. By this very definition such a being lacks nothing and is therefore perfect. To lack existence would most certainly be an imperfection, therefore its own Real Existence is inherent in the Idea of God in the same way that it is inherent in the idea of a triangle that the sum of its angles is equal to two right angles.³¹ God, being perfect and incapable of malicious deception, in turn gives reality or objective existence to the world outside of my mind, including and above all, the fact that my body is real.³² Not only 'was' I created by God, my existence and that of the world *is* concurrently sustained by

God's Existence from one moment to the next; so it never occurs that something comes out of nothing.³³ In this sense also, God's Being is immutable or eternal.³⁴

Descartes gives several reasons why our many errors and misconceptions of this world are not due to an imperfection in God. Yet they do not seem to him sufficient to explain why God could not have created a limited being that was nevertheless not subjected to constantly being misled and mired in misery on this account. We could have been crafted to more easily find and use the natural light of our reason. Descartes believes that this leaves us with the conclusion that in order for God to be absolved from in any way being the source of imperfection, there must be a counter-principle of Nothingness which is responsible for the deceptive semblance of *that which seems to be but is not* and all the confusion and suffering it causes.³⁵

We are beings that, as it were, stand between God and Nothingness, participating in both and consequently consisting of the perfection endowed to us by God as well as its corruption by the imperfection of Nothingness.³⁶ Something cannot come to be out of Nothingness, nor can something perfect come to be from something imperfect.³⁷ Therefore, for Descartes, God, though co-extensive with Existence in being infinite, omniscient, and omnipotent, would have to be wholly separate from Nothingness, and as it were, exist as its antithesis. The *mutual exclusivity* of modes that formally comes to define "substance" for Descartes mirrors, and is only possible on the basis of, his primordial binary opposition of Being and Nothingness.³⁸

This is problematic. Neither can Being guarantee the clarity and distinctness of our knowledge of facts concerning a 'real' external world, nor can Nothingness be blamed for exerting a perpetually 'voiding' influence on this god-given certainty. "Being" suggests an undifferentiated Oneness. Yet, if everything were One, no thing could be distinguished from another in space and therefore no thing could move at any speed relative to the differing motion of another thing so as to establish temporality. Infinity is the negation of space and eternity is the negation of time. Without space and time (of some sort, even if non-linear) this One called "Being" would in fact be nothing at all. It is impossible to conceive of 'nothing', let alone speak of it. Nothingness is not viable, it cannot exist in any way at all and so neither can Being-in-itself. Both total

Nothingness and the pure presence of Perfect Being are (by virtue of reversion to each other) mutually impossible.

What also becomes impossible, once this binary is deconstructed, is banishment of the aforementioned “ghost” and the spooky phenomena that Descartes attempts to prohibit – a *spectral* intermingling of what are abstracted as ‘mind’ and ‘matter’. A recent biography by A.C. Grayling suggests that Descartes actually had a deep involvement with the occult. In the context of the biographical information unearthed by Grayling, it is not unreasonable to see Descartes’ terror in the face of the paranormal, and his desire to combat those seeking an understanding of the occult, as nothing less than the basic motivation for his elaboration of the intellectual paradigm that bears his name.

2.3 Cartesius, the Inquisitor

With their military-style institutional structure and discipline, the Jesuits saw themselves as soldiers in the vanguard of the Counter-Reformation. They administered some of the most prestigious academies in Europe and their primary method of resisting the reformation was to inoculate young minds against heresy by giving them an education that was reputed to secure them in the Catholic faith forever after.³⁹ Descartes received just such an education at two premier Jesuit institutions, La Flèche academy and the University of Poitiers. Toward the end of 1619, a certain Jesuit “Father Jean B. Molitor” presented Descartes with a copy of Pierre Charron’s *Traite de la sagesse*, which bears the inscription “to the most learned, dear friend and little brother, René Descartes.”⁴⁰ Charron was a philosophical theologian and celebrated preacher who used *skeptical* criticism of the sciences of the time as a means to reinforce Catholic orthodoxy at the expense of a pursuit of neo-Pagan knowledge that might lead to heresy. The pretension “to know nothing” with certainty, which becomes central to Descartes own project, acts for Charron as a device to wash the brain clean of potential sources of heresy in order to render it empty enough to be engraved by truths of faith that God alone reveals.⁴¹ Like Descartes after him, Charron advises that throughout the course of uprooting higher intellectual beliefs from the mind, one should defer to the customs of the country in which one lives – insofar as those customs are basically in line with God’s injunctions. Several passages from the *Discourse on the Method* are relevant in this regard:

I revered our theology, and aspired as much as anyone else to reach heaven. But having learned as an established fact that the way to heaven is open no less to the most ignorant than to the most learned, and that the revealed truths which guide us there are beyond our understanding, I would not have dared submit them to my weak reasonings... Now, before starting to rebuild your house, it is not enough simply to pull it down... you must also provide yourself with some other place where you can live comfortably while building is in progress. Likewise, lest I should remain indecisive in my actions while reason obliged me to be so in my judgments... I formed for myself a provisional moral code consisting of just three or four maxims... The first was to obey the laws and customs of my country, holding constantly to the religion in which by God's grace I had been instructed from my childhood...⁴²

During the dozen years between the completion of Descartes' education at La Flèche and Poitiers and his philosophical retreat in the United Provinces of the free Netherlands, he joined the armies of Prince William of Nassau and Duke Maximilian of Bavaria and thereby participated in opening events of the Thirty Years War.⁴³ In 1620, Descartes was at the Battle of White Mountain in the vicinity of Prague, and although his presence there was allegedly that of an "assisting...observer", he remained with the Holy Roman army as Jesuits flooded into Bohemia to persecute Protestants, burn their chapels, and execute their leaders.⁴⁴ Frederick, Elector Palatine, the defeat of whose forces at the Battle of White Mountain Descartes approvingly 'observed' in 1620, was a strong supporter of the pursuit of esoteric knowledge by occultists.⁴⁵ Just as King Henri III of France had backed Giordano Bruno and John Dee was the right hand man of Elizabeth I, the Rosicrucians received the backing of the Elector Frederick in his capacity as head of the Protestant Union. They sought to use "the secret aid" of this "Lion" (Frederick's emblem) as an agent for the destruction of the Holy Roman Empire.⁴⁶ The decisive defeat of Frederick at the Battle of White Mountain in 1620 allows for the persecution of Rosicrucians even in Heidelberg, which had been Frederick's capital, as it came under the occupation of the Hapsburg armies. In 1621, in that city, a pamphlet with the title "A Warning Against the Rosicrucian Vermin" was widely circulated.⁴⁷

During the 1610s, the magical arts of Hermeticism, Cabala, and Alchemy practiced by numerous renaissance scientists – such as Paracelsus, Giordano Bruno,

Cornelius Agrippa, and John Dee, was woven together by a “Brotherhood of the Rosy Cross.”⁴⁸ These Rosicrucian initiates, who were known as the “Illuminati” and the “Invisibles”, traveled around Europe in stealth with the aim of effecting a “Universal and General Reformation” that would usher in a “new dawn” for mankind or, in language akin to that of the author of *The New Atlantis*, they promised a great “instauration” of esoteric knowledge lost through our catastrophic fall from a higher state of being.⁴⁹ They were renaissance men, polymaths well versed in architecture, music, navigation, geometry, fine arts, mathematics and astronomy – all arts that they saw as being in need of reformation.⁵⁰ They aimed to “restore all sciences, transmute metals, and prolong human life.”⁵¹ They were cosmopolitans who claimed no country as their own and were believed able to speak, fluently and without book learning, the language of any country in which they needed to operate.⁵² It was rumored that they remained in contact with each other, over great distances, by means of Telepathy.⁵³

Grayling suggests that it can hardly be a coincidence that Descartes only reappears in Paris, after many years, just when “the Rosicrucian scare” breaks out there in 1623.⁵⁴ Panic had erupted over rumors that six of the Invisibles had come to Paris and were lodging at the Marais, using it as a base of operations for their diabolical plot.⁵⁵ Descartes appeared to be personal friends with a couple of Rosicrucians, Jacob Wassenaar and Cornelius van Hooghelande, and he carried out correspondences with others.⁵⁶ Consequently, during the scare Descartes himself was suspected of being a Rosicrucian.⁵⁷ Daniel Huet, writing in the 1690s, claimed on evidence of letters purportedly written by Descartes to Queen Christina of Sweden in 1652 and 1656, that Descartes was indeed a Rosicrucian who had faked his death and funeral in 1650 so that he could move from the Netherlands, where he had been discovered, to Sweden in order to pursue his studies of the occult.⁵⁸

As Grayling points out, this is highly unlikely given Descartes’ high-level Jesuit connections and loyalties, especially his relationship with Marin Mersenne.⁵⁹ This man who was one of the chief “hammers” of the Holy Inquisition tasked with persecuting the Rosicrucians, was not only Descartes’ close friend but, from 1620 onwards, Mersenne was most responsible for publicizing Descartes’ genius and maintaining his contacts with the intellectual world at large.⁶⁰ This Jesuit inquisitor, who was also a graduate of

Descartes' alma mater, La Flèche, was fully convinced that a Rosicrucian cabal of great occult power actually existed and was carrying out a transnational conspiracy at the behest of Satan.⁶¹ Mersenne pushed for the development of an empirical science that would eschew everything alchemical and leave spiritual phenomena within the purview of the Church.⁶² He epitomized that ecclesiastical trend of thinking on account of which the rationalist Galileo was merely chastised and subjected to house arrest, whereas the occultist Bruno was burned at the stake for his scientific understanding of Nature.⁶³ While both men threatened Aristotelian Scholasticism with innovations, Galileo's mechanistic view of Nature left affairs of the soul as matters of faith whereas Bruno's hylomorphism defied any distinction between empirical science and spiritual phenomena. Bruno became the martyred great saint of occultists during the late Renaissance and early modern era. Even though most of these Alchemists obscured the anti-Christian character of the esoteric tradition revived and developed by Bruno, so that the Rosicrucian Order, for example, even donned the cloak of 'esoteric Christianity', one can see why the Rosicrucians and other occultists were suspected of Satanism.

Given Descartes' close relationship with Mersenne and other inquisitorial Jesuits, and his involvement with Catholic storm troopers sent to defeat Frederick, the patron of the Rosicrucian conspiracy, what is more likely than that Descartes was a Rosicrucian, is that he was a Jesuit spy sent to infiltrate the Rosicrucian Order so as to facilitate the eradication of its occult heresies by the Holy Inquisition.⁶⁴ He would only have been one of many agents then employed by the Jesuits to this end.⁶⁵ Grayling suggests that Descartes' early adulthood inheritance of a share of his mother's estate was insufficient to fund his extensive travels throughout Europe, especially at the level at which he lived, and that these travels were probably bankrolled by the Jesuits as a business expense, the primary aim of them being to conduct espionage.⁶⁶ This would explain, for example, both his motive in frequenting aristocratic casinos and his financial ability to haunt them so as to bear witness to the indiscretion of various inebriated gentlemen. Several of Descartes' enemies in the Netherlands accused him of being a spy, and his personal motto was, "The Hidden life is best."⁶⁷

In 1628, after a "private conference" with the notorious Cardinal Berulle, Descartes left France for good, effectively exiling himself in the United Provinces, where

he changed his address frequently and kept his whereabouts secret.⁶⁸ Grayling makes the case that Descartes was engaged in intelligence work on behalf of the Jesuit order and that the meeting with Cardinal Berulle that precipitated his exile was something akin to the interrogation of a spy who had been discovered and to whom it had been made clear that he was no longer welcome in his homeland.⁶⁹ The Jesuits were at that time instigators of efforts by the Hapsburg rulers of the Holy Roman Empire (of mostly German states) to reclaim those parts of Europe that had fallen to the Protestant Reformation. They were especially afraid that the Brotherhood of the Rosy Cross intended to replace them as the most organized and socio-politically influential force in Europe.⁷⁰ Although France was still largely a Catholic country, both its government and the Papacy itself viewed this Jesuit crusade as a reckless endangerment of the European balance of power; France and the papacy were opposed to the efforts of the Holy Roman Empire to the point that they resisted it with force of arms.⁷¹ Descartes had fought on the other side. In particular, he was in the company of Imperial troops commanded by the savage comte de Bucquoy as they captured and destroyed the protestant town of Hradisch in Moravia, where the local population was subjected to a campaign of terror that included the wholesale rape and massacre of civilians.⁷² It is interesting that the sole public reference that Descartes makes to any of these events are the few lines in the *Discourse on the Method* where he mentions being on his way back to rejoin these armies, at which point he was forced to take shelter from an early winter storm at a stove heated room in Ulm.⁷³

This is where the “night of dreams” that inspired his philosophical meditations took place. As he recounted in a notebook preserved in part by Leibniz, Descartes was *terrified* by these “dreams.” They involved phantoms and an apparently psychokinetic incident, wherein, between two of the dreams, Descartes was frightened out of sleep by a sudden clap of thunder and saw sparks fly around the room as he felt his head explode.⁷⁴ In the night, Descartes prayed to God to protect him from the presence of an evil spirit by his bedside that he believed had been sent to seduce him.⁷⁵ He was in doubt as to whether what he saw that night could really be called “dreams” or whether they were actually *visions*.⁷⁶ Either way, Descartes attributed deeply portentous significance to them.⁷⁷ One of the visions that he took to be “prophetic” was a book with copperplate portraits in it, of

a kind that he was presented with by an Italian painter who paid him an unexpected visit the day *after* the “night of dreams.”⁷⁸

Descartes considered what he experienced that night so formative of his later philosophical and scientific aspirations that he kept his record of these experiences with him for the rest of his life.⁷⁹ Among the most telling lines in these notes are one where Descartes announces his intention to enter the world stage “masked” and another where he simply states that, “the fear of God is the beginning of wisdom.”⁸⁰ The Descartes that we have been taught about in the academy is the masked man. Beneath the Rationalist mask may well lie a terrified soul in league with those sadistic inquisitors who immolated Bruno, and who murdered countless other sagacious renaissance men and women accused of Witchcraft in order to put the fear of God back into society at large.

2.4 Kant’s Cartesian Rejection of the Paranormal

Kant revises and adopts Descartes’ basic ontological standpoint. In the *Critique of Pure Reason*, Kant maintains the Cartesian *ego cogito* as the central pivot of his ontology by reframing it as a synthetic unity of apperception. “Apperception” is any experience of which the subject is able to say, “this is mine”, i.e. self-conscious experience. The unity of apperception is to be found in the “I think” that accompanies all perceptions.⁸¹ This unity of apperception is transcendental because it can never be defined from the content of any given experience. The *transcendental* (as opposed to the *empirical*) is that which is concerned not with objects but with our mode of knowing them.⁸² The transcendental unity of apperception, in the “I think”, precedes all the data of intuition.⁸³ Kant attempts to establish the objective validity of the categories in terms of which our cognitive faculties organize our experience in a deduction that begins with the realization that pure intuitions of sensibility “are nothing to us” unless they are first unified at least into a manifold of belonging to one consciousness and not that of an other.⁸⁴ Thus the transcendental unity of consciousness underlies the possibility of sensation as well as that of thought, whose empirical contents lack any unifying element. Kant equates the transcendental principle that unifies all possible intuition in a manifold for my consciousness with the Cartesian “I think” that must accompany all representations *as*

such for them to be something *to me*.⁸⁵ This principle of the unity of consciousness has an analytic form of the type 'I am I'.⁸⁶

We can know certain things prior to experience, by our Pure Reason, because such *a priori* structures are the very conditions of the possibility of experience for beings constituted such as ourselves. Although a priori knowledge is what is known prior to any one experience or another, it can never transcend the limits of possible experience.⁸⁷ Pure reason is the part of the faculty of reason that "contains the principles by which we know anything absolutely a priori."⁸⁸ All a priori knowledge is, however, only knowledge of appearances, *not* of *things-in-themselves*. If there were no rationally inaccessible realm of things-in-themselves, even the soul would have to be considered subject to the principle of causality. Without free will, morality, or even goal-directed practical action in general, would give way to the mechanism of nature. Even though we cannot rationally *know* things-in-themselves, especially the human soul, we *can* think them. It would make no sense for things to be appearances if there is nothing real, which appears to be such and such. It is only required that we can *think* freedom as a concept without contradiction, in order for us to view our actions as *appearing* to be determined by the causal mechanism of nature while really being free when the human soul is thought in-itself. Kant believes that the possibility of morality requires us to guarantee freedom in this manner.

In the *Groundwork of the Metaphysics of Morals*, Kant attempts to resolve the contradiction between "free will" and natural determinism by setting up a parallelism of two "different standpoints".⁸⁹ From the standpoint of speculative reason all phenomenal 'mere appearances', including that of the subject as an object, are determined by laws of nature. From the standpoint of practical reason, the subject is immediately conscious of his own causal autonomy or freedom of will.⁹⁰ This requires positing things-in-themselves in an "intelligible world" beyond mere appearances, which cannot be the object of any intuition, and of which nothing further than its existence can be cognized.⁹¹ Kant claims that "freedom... signifies only a 'something' that is left over when I have excluded from the determining grounds of my will everything belonging to the world of sense."⁹² In other words, we have arrived back at Descartes' dichotomy between a non-extended mind and extended phenomena of the material world, except that now the later

is viewed as an isomorphic projection mirroring the basic structure of those experiences possible for the former.

On what basis, though, does Kant determine what kinds of experiences are *not* possible? Moreover, is it a coincidence that the types of experiences that he deems *impossible* are just those which would allow for the human mind to act directly on the world through its own choices instead of resigning itself to a parallelism that renders 'freedom' as mysterious as 'God'?

It may seem that Kant's ontology and epistemology in the *Critique of Pure Reason* is purely critical or negative. However, it does have a positive intent. By denying *knowledge* of things-in-themselves, it is possible to make room for *faith*: "...all objections to morality and religion will be forever silenced... in Socratic fashion... by the clearest proof of the ignorance of the objectors." At the same time, this will focus all of the attention of great minds on progress in the hard sciences, rather than having their energies wasted in speculative heresy that is dangerous to society. Common people have never been affected by the onto-theological proofs and doctrines of the schools, so if these have to be sacrificed by denying a priori knowledge of such things as God, immortality, etc., it is in fact a gain rather than a loss for both traditional religion based on faith in Revelation and for the intuitive Deist belief in God on the basis of awe at the precision of natural design.⁹³ The latter was, of course, the basis for the Cult of the Supreme Being in the French Revolution, while the former was restored when the rootless, rationalist revolution gave way to Bonaparte's reactionary coup.

Kant explicitly states that the aim of the *Critique of Pure Reason* is to definitively delimit Reason in such a way as to make room for faith. In *Religion Within the Limits of Reason Alone*, he in turn defines the acceptable parameters of "faith" in such a way as to categorically forbid any faith in acts of the will that would contravene deterministic laws of nature. These events that deviate from natural law are most disturbing to Kant when they are attributed to finite beings executing their own individual will, rather than being attributed to God, whose will – *he* seems to think – might somewhat less offensively be seen as encompassing *physical* law. The possibility that such a 'demonic' agent-causal free will could be exercised toward morally wrong ends particularly alarms Kant.⁹⁴

Kant observes that most people nowadays usually employ the word ‘miracle’ as a mere figure of speech, such as a doctor who tells a patient that there is no help for him unless a miracle occurs – i.e. he is certain to die.⁹⁵ Such "sensible men" may not deny "that miracles occurred of old", for example among the healers of the early Christian community, but they, and their governments do not tolerate new miracles or allow any place for them in the affairs of the present life. Kant argues that because there is no scriptural basis for this stance, which even Orthodox Christianity upholds, it is actually "a maxim of reason" that paranormal events cannot occur, and he asks: "...is not this same maxim, which in this instance is applied to a threatened disorder in the civil life, equally valid for the fear of a similar disorder in the philosophical, and the whole rational contemplative commonwealth?"⁹⁶ In other words, whether he realizes it or not, Kant is basically siding with the persecution of ‘witches’ and connecting the prohibition on their abilities on account of a threat to the social order with the theoretical prohibition of psi phenomena on account of epistemic disorder. Kant then mocks people who only allow belief in little, un-sensational miracles such as personal providence, pointing out that "what matters herein is not the effect, or its magnitude, but rather the form of the course of earthly events, that is, *the way in which the effect occurs*, whether naturally or supernaturally..."⁹⁷ Kant might as well have listed, as an example of such a 'little miracle', the ability of a mental substance to affect the pineal gland – according to Descartes – or some other small physical aggregate in the brain, and thereby control the body by means of otherwise natural mechanical principles. Kant's point is that something like this is no more possible than lifting gigantic stones by one's mental intent alone – it is not a question of degree, but of the nature of causality.

Kant dismisses all belief in ‘supernatural’ experience as *superstition* on the grounds that "our use of the concept of cause and effect cannot be extended beyond matters of experience, and hence beyond nature."⁹⁸ Kant's fundamental reason for rejecting these phenomena is that acceptance of them allegedly involves “the belief in knowing through experience something whose occurrence, as under objective laws of experience, we ourselves can recognize to be impossible.”⁹⁹ We see that Kant's dismissal of the ‘supernatural’ is based on the conviction that no one can ever really experience or witness such phenomena, and that reports of any such experience must either be a mere

metaphor or an outright fraud. He explains that: "...when reason is severed from the laws of experience it is of no use whatsoever in such a bewitched world... the supernatural... is not, according to the laws of reason, an object of either theoretical or practical use."¹⁰⁰

Empirical research into how psychic influences occur is what most aggravates Kant. Whatever else Kant says to justify himself, the concern that a "theoretical" grasp of psychic phenomena might allow us to "perform them" so effectively that we "storm heaven" – i.e. *violate the sacred domain of religious belief* – seems to be what really motivates him to reject these phenomena out of hand. Moreover, this rejection motivated by terror in the face of the paranormal lies at the basis of Kant's determination of the categories of the faculty of pure Reason as the lawgiver of Nature. He can in no way tolerate an endeavor to understand the conditions required for 'supernatural' phenomena of various kinds, in order to reliably cause them to occur and to execute one's will by means of them and in contravention of (what he takes to be) natural laws. Kant rails against so-called "magicians" who claim that this method is after all no different from that of scientists who do not understand the ultimate cause or causes of natural phenomena (any better than the 'magician' understands that of 'supernatural' occurrences) but who nonetheless develop a sufficiently precise empirical knowledge so as to practically design technological devices that further the human will: "... to think that, through... a really *firm* theoretical faith in miracles, man could himself perform them and so storm heaven – this is to venture so far beyond the limits of reason that we are not justified in tarrying long over such a senseless conceit."¹⁰¹

Kant himself did, however, "tarry long" over someone with such a conceit – at least in his youth, when he undertook an extensive study of the wondrous works of Emmanuel Swedenborg. A scientist and statesman by training and profession, at the age of 45 Swedenborg began having paranormal experiences of other worlds and communications with their inhabitants. The major work wherein he describes these encounters, and ventures an esoteric interpretation of scripture on the basis of them, is the eight-volume *Arcana Coelestia* or "Secrets of Heaven", published between 1749 and 1756.¹⁰² Kant purchased and read this entire work, and moreover he spent his time and money investigating stories about Swedenborg's various paranormal abilities.¹⁰³ Swedenborg was widely condemned as a heretic, to the point where at the urging of the

conservative Leipzig theologian Johann August Ernesti (1701–1781), heresy proceedings were instituted against clerics who had positively received and reviewed Swedenborg’s writings. The early Swedenborgian works of Friedrich Christoph Oetinger (1702–1782) and Heinrich Wilhelm Clemm (1725–1775) were declared heretical by the government of Württemberg, which confiscated all copies from the citizenry on pain of arrest.¹⁰⁴

When, in the midst of this atmosphere, rumors began to circulate that Kant was interested in Swedenborg and was researching his experiences, the young aspiring academic believed that his attainment of a tenured professorship would be endangered.¹⁰⁵ In order to mitigate this danger, he wrote a very strange little book entitled *Dreams of a Spirit-Seer*. It was published in the winter of 1766 – *anonymously*, although enough people knew Kant to be its author that it was effective in addressing the already circulating rumors of his interest in Swedenborg. What is bizarre about the text is that viewed from a rhetorical perspective it mocks Swedenborg, but the content, when carefully examined, conflicts with the mocking tone and satirical style. It demonstrates not only a close reading of Swedenborg and a positive evaluation of some of his paranormal feats, but also something far more astonishing: it is in *this* early text, with reference to Swedenborg’s otherworldly encounters, that Kant first develops all of the major structures of the metaphysical and ethical system later crystallized in such books as *Groundwork of the Metaphysics of Morals*.¹⁰⁶ Gregory R. Johnson has demonstrated this in his dissertation, entitled “A Commentary on Kant’s *Dreams of a Spirit-Seer*.”¹⁰⁷

Kant says that it would be “splendid” if empirical evidence of paranormal experiences of the kind that Swedenborg has had could be taken as “a real and universally acknowledged observation” on the basis of which to validate “a systematic constitution of the spirit world” of the kind that he develops in this text and that otherwise “could be inferred or only supposed with some probability...merely from the concept of spiritual nature as such, which is far too hypothetical.”¹⁰⁸ One cannot overemphasize the importance of such a statement. It demonstrates, quite to the contrary of Kant’s later position, that the ethically-oriented metaphysics laid out from the *Groundwork* onwards, was developed with a view to the *empirical* evidence for ghosts, telepathy, and so forth. This reading is further supported by the fact that Kant takes pains to separate Swedenborg’s badly rationalized interpretations of his experiences from the actual

paranormal phenomena themselves, which he further subdivides into three classes ranging from truly otherworldly out of body experiences to wakeful imaginings.¹⁰⁹ Kant proposes to systematically distill the basic worldview implicit in these experiences.

In *Dreams of a Spirit-Seer*, Kant recognizes that even one solid case of the kind reported by Swedenborg would be revolutionary in its implications: “Should he admit the probability of even one of these stories? How important would such an avowal be, and what astonishing implications could one foresee, if even only *one* such occurrence could be supposed to be proven?”¹¹⁰ He goes on to give us just such a case. As Kant recounts, one afternoon towards the end of 1759, upon his return from England, a merchant in Gothenburg invited Swedenborg to an evening party. At the party, the visionary claimed to suddenly perceive a raging inferno in the southern suburb of Stockholm and, at various intervals through the night, he described the spread of this fire and how it had finally been gotten under control. The astonished guests repeated Swedenborg’s vision to nearly everyone they knew so that by the next morning the entire town had been informed. It was only two days later that the first news about the fire finally came from Stockholm, confirming in detail Swedenborg’s account of the conflagration’s point of origin, the extent and pace of its spread, and the manner of its eventual containment.¹¹¹ Kant suggests that the investigation of such cases by people who have enough money and nothing better to do with their time might at least prevent Swedenborg from being turned into the next Apollonius of Tyana by someone like Philostratus on account of it no longer being possible to interview witnesses that are long deceased.¹¹²

Kant sees paranormal phenomena as posing a unique challenge to Philosophy, since they cannot be doubted with impunity and yet to validate many of them would open philosophers to mockery. It is preferable for the intellectual, he says, to deny the reality of such seemingly incomprehensible occurrences altogether than to admit as much ignorance of it as the common man. This prescient prediction is particularly striking: “One can, therefore, be sure that an academy of sciences will never make this matter into a prize question, not because the members of it are free of all acceptance of the opinion in question but because the rule of prudence rightly sets limits to such questions... And thus stories of this kind will have at any time only secret believers, but publicly they are rejected by the reigning fashion of incredulity.”¹¹³ Kant believes that “scoffing” at the

paranormal should be encouraged “whether it may be justified or not” because it will hold philosophers back from attempting serious interpretations of paranormal phenomena and thereby being “caught in such bad company” that they place themselves “under suspicion.”¹¹⁴ In other words, yet again, he is worried about what people will think, and on the basis of this concern he is even willing to “in no way... blame” the person who “simply dismisses... without further ado” those who experience the paranormal as “candidates for the hospital and thus spares himself all further inquiry.”¹¹⁵ This encouragement of the hospitalization of those with inconvenient experiences is hardly tempered when Kant goes on to add: “if it was once found necessary at times to burn some of them it will now suffice simply to purge them.”¹¹⁶

On the basis of his dualistic theory of paranormal experiences, wherein any apparitions in *this* world are derangements and delusions of the senses projecting grossly distorted mental intuitions of the other worlds, Kant denies that whatever kernels of truth they contain can ever be sufficiently separated from the “crude illusions” that the imagination mixes with them so as to ever be “useful” observations.¹¹⁷ Invoking the blind prophet Tiresias, Kant claims that so-called ‘knowledge’ of the other world can only be gained at the great expense of the rational common sense that allows one to successfully navigate this one – such that one who is *gifted* with heavenly insight is viewed as a fool on the Earth.¹¹⁸ Unlike natural beings, which even if they are as small as “a drop of water, a grain of sand, or something even simpler”, offer a subject for inexhaustible observations and rationally deduced knowledge, according to Kant “there can be all sorts of *opinions*” about paranormal phenomena “but never any *knowledge* about them.”¹¹⁹ It can only be ascertained *that* there are spirits, but “since no *data* can be found in the whole of our sensations and that one must make use of negations in order to think of something so very different from sensuous things” it can be concluded that “the pneumatology of mankind can be called a doctrine of our necessary ignorance with respect to a supposed kind of being.”¹²⁰ Of course, this statement contradicts the main subject matter of *Dreams of a Spirit-Seer*, namely the *sense data* of Swedenborg’s *empirical* accounts of paranormal occurrences and abilities. But then Kant has whitewashed this contradiction by radicalizing Swedenborg’s own dualism in a Neo-Cartesian direction and claiming

thereby that his “visions” are nothing more than mental intuitions of a non-sensory world projected into the physical world through pathologically deranged senses.

The one type of paranormal phenomenon or ability that most strongly challenges this radically dualistic parallelism is psychokinesis, which as we saw above Kant strongly condemns in *Religion Within the Limits of Reason Alone* and which he mentions only obliquely and fleetingly in *Dreams of a Spirit-Seer*. On one instance he mentions maternal impressions as a type of psychokinesis while dismissively listing a whole slew of paranormal phenomena that he finds particularly offensive: “Among these belong spiritual healing, the dowsing rod, precognitions, the effect of the imagination of pregnant women, the influences of the lunar cycle on animals and plants, and the like.”¹²¹ This is not the only reference to this type of psychokinesis. One of the most striking passages in *Dreams* is one where Kant compares his “reservations” about reporting Swedenborg’s visions in any detail to those of a naturalist who must take care that not just anyone sees too clearly what is in his curiosity cabinet, since one of these freaks of nature might leave a harmful impression on a reader’s mind the way that traumatic experiences of pregnant persons or animals may result in a maternal impression that deforms the development of the fetus.¹²² This passage is characteristic of Kant’s sarcastically disguised duplicity and smug disingenuousness in this text as a whole.

Another instance where Kant very clearly makes reference to psychokinesis is even more revealing; he draws a connection between it and the simple fact of the body being moved by the immaterial will, of whose existence he is convinced since it is indispensable to ethics: “That my will moves my arm is not more intelligible to me than if someone said to me that he could stop the moon in its orbit; the difference is only this: that I experience the former, but my senses have never encountered the latter.”¹²³ With regard to “how an immaterial nature can be in a body and act through it”, Kant admits “that I do not understand this at all.” He adds: “The very same ignorance also makes me not so bold as to deny totally all truth in the various ghost stories, yet with the familiar yet also strange proviso: to put any single one in doubt but to ascribe some credence to all of them taken together.”¹²⁴ This is very convenient since the one common denominator of “all of them taken together” is that there is an afterlife and this, when taken by itself as an abstraction, encourages moral conduct in this world, whereas the immorality – or rather,

amorality – of the details of various grisly accounts of paranormal experiences might raise the terrifying question of whether there is a spiritual basis at all for any traditional ethical values. The strongest argument that Kant sees in favor of the paranormal is the hope for a future life and he takes this “fond hope that one may still exist in some way after death” to be what propels the popularity of ghost stories.¹²⁵ With as much piety as an orthodox priest chastising heretics who would dabble in the occult, Kant insists that: “we must wait until we are instructed, perhaps in the future world, by new experiences and new concepts about powers in our thinking self that are still hidden from us.”¹²⁶ In fact, he repeatedly insists on this, in a more and more parochial tone each time: “to the curious who so pointedly inquire about it one may give this simple but very natural reply: that it would probably be best *if they would deign to wait patiently until they arrived there.*”¹²⁷

When Kant claims that the effect of mind over matter is not rationally comprehensible it is because he has restricted his definition of the “rational” to the application of the rules of identity and contradiction to the analysis of a causal nexus that can be expressed in terms of mathematical equations.¹²⁸ The postulates required to even begin investigating paranormal phenomena with a view to understanding them are “fictions” rather than scientific hypotheses because, according to Kant, any proper hypothesis only concerns fundamental causes and forces whose relations must remain constant so that the laws governing them “must be able to be proved at all times.”¹²⁹ On this essentially Cartesian basis, of equating *the real* with what admits of the predictive calculability and repeatability of *mathematical* demonstration, Kant agrees with Descartes that while he can distinctly conceive of himself as an immaterial subject with thoughts, the power of choice, and other determinations different from those of the concepts in terms of which he conceives of his body and other material beings, he cannot coherently think of the connection of himself qua mind to himself qua body.¹³⁰

It is the “irregularity” of “certain alleged experiences” which damns them in Kant’s eyes. He rejects any experiences that “cannot be brought under any *law* of sensation accepted by *most* human beings” as no true sensory experiences at all.¹³¹ Here something else essential to Kant’s suppression of the paranormal begins to become clear, something connected to the fact that he wants to emphasize only the most abstract

elements of Swedenborg's vision in order to take them, at best, as validation for the existence of a "spiritual republic" where justice is done impartially to all souls based on their innermost ethical intentions. The undemocratic character of the paranormal offends Kant. He cannot countenance the fact that there may be rare experiences and abilities open only to a few people: "But true wisdom is the companion of simplicity, and as with the latter the heart gives direction to the understanding, it generally renders superfluous the great apparatus of learnedness, and its aims do not need *such means as can never be in the power of all human beings.*"¹³² Kant is deeply disturbed by the thought that "the future destiny of the honest" simple souls could in any way be adversely affected by their not having paranormal abilities, the workings of which even intellectuals such as himself fail to comprehend.¹³³ His insistence that all phenomena of nature admissible of scientific study be democratic and egalitarian is probably the basis of his description of the investigation of paranormal occurrences as "uncivil."¹³⁴ This should bring to mind the passage cited above from *Religion Within the Limits of Reason Alone*, where Kant compares the disorder wrought by the paranormal in "the whole rational contemplative commonwealth" to a criminal or terroristic instigation of "disorder in civil life."

The claim that the question of the paranormal is "a question that requires data from a different world than the one he senses" is the basis for Kant's negative re-defining of metaphysics as "a science of the limits of human reason."¹³⁵ Only a little further on, Kant rephrases this proto-positivism in the following terms, wherein the paranormal is equated with an impossible and unfathomable limbo that belongs outside the bounds of proper scientific inquiry: "For in order to choose rationally, one must first know even the unnecessary, indeed the impossible; but eventually science arrives at the determination of the limits set for it by the nature of human reason; all unfathomable schemes that may not be unworthy in themselves but lie outside of the sphere of mankind fly into the limbo of vanity."¹³⁶ This banishment of the paranormal as a legitimate subject of study will, he hopes, render even metaphysics 'scientific' rather than speculative. The more rigorous, i.e. the more scientific, philosophical inquiry becomes, the more strictly it should exclude and marginalize the paranormal *in principle*: "But if this investigation turns into philosophy, which judges its own proceedings and which knows not only objects but their relation to the human understanding, then the boundaries draw closer together and marker

stones are laid that never again allow investigation to wander beyond its proper district... philosophy moves this phantom of insight yet further away and convinces us that it lies wholly beyond the horizon of mankind.”¹³⁷ Indeed, Kant’s claim that there is really nothing at all to *know* of the paranormal is undermined by his repeated assertions to the contrary that an understanding of it is something beyond the scope of *merely human* reason.¹³⁸ Anyone with a rational faculty as “humble” as his ought to resolve, as Kant does, to make the greatest use of his limited powers in projects appropriate to their own scope, since “if one cannot reasonably attain the great” it is prudent “to restrict oneself to the mediocre.”¹³⁹ He refers to this prudence as “wise simplicity.”¹⁴⁰

Chapter 3. Artistic Genius and the Titanic

Certain passages in Kant's writings on the spectral have left me with the distinct impression that he cannot bear the thought that honest to goodness folk with no psychic powers can be harmed with impunity by a terribly unethical virtuoso of the occult arts. In view of this it is doubly strange that the spectral resurfaces in just this very unevenly distributed form in Kant's aesthetic theory on the nature of genius in the arts. The most surprising element of this occult account of aesthetic activity and the appreciation of the beautiful is something that Kant calls "aesthetic ideas." These are the archetypes of everything beautiful – whether in Nature or whether crafted by means of artistic genius. But they are also far more than that. Kant admits that these ideas, which are of an imaginal or imagistic type, and which can only be grasped by aesthetic judgments, and are solely expressed by a gifted genius, *are the basis for the development of concepts*. Aesthetic intuition of these ideas sets in motion a "free play" of the cognitive faculties wherein more than one concept may be developed on the basis of any given aesthetic idea, but no concept or concepts are ever able to rationally comprehend these aesthetic ideas or their own genesis in terms of them.

These archetypal ideas, which the genius alone is capable of conjuring, could even be the wellspring of the elaboration of all rational concepts fundamental to the sciences. They are neither phenomenal nor noumenal, but seem to have just that *spectral* existence that so haunted Descartes and that Kant found repugnant about the spiritual world of Swedenborg. Their intermediate character, and the fact that they are responsible for every judgment of the beautiful even when it concerns natural beings, puts the lie to attempts to draw a sharp divide between Mind and Matter. Prometheus and Atlas would, in Kant's terms, be "aesthetic ideas" that motivate natural and human activity in the way that he thinks *ingenium* unconsciously motivates the creative endeavors of the genius. I will go on to argue that they are the aesthetic ideas from out of which the fundamental concepts of the sciences are developed. Since it is these sciences that seem to have

desecrated life through their world-transforming technological power, it would be of great significance to demonstrate how they are themselves expressions of the sacred.

The understanding of aesthetic ideas and of creative genius can just barely be extracted from between the lines of Kant's third and final critical text and he never reconciles it with the doctrine of the first two critiques or revises them in light of it. For the further development of these insights into the occult nature of aesthetic intuition we need to look to Friedrich Schelling. In the thought of Schelling what Kant predominately took to be the distinction between the phenomenal world of Nature as it appears to us and the noumenal world of things in themselves becomes only a distinction between our conscious experience of the world and our unconscious or subconscious intuition of beings. The apparent mechanism, and mathematical predictability, of the natural world is only the function of a constraining or contracting force or "will" that fortifies our conscious experience by offering us relatively stable and well differentiated beings in distinct relationships to one another. There is, however, an unconscious or subconscious drive to plunge back into the abyss of nothingness that underlies such well-ordered appearances. The artistic genius is able to create what she does on account of a rare capacity to synthesize these conscious and unconscious types of mental functioning. Unlike in the case of most people, her conscious mind is not entirely closed off from her subconscious. The artistic genius is able to consciously express what she intuits subconsciously by allowing her mind to plunge into the abyssal background of beings.

This is, however, not limited to the canvas or the block of marble. It is a real contravention of the merely apparent 'laws' of Physics, one that restores the abyssal freedom of the creative will. What Kant is most afraid of, Schelling also acknowledges – namely that genius of this kind is inhuman and poses a great peril to the world of ordinary mortals. Schelling says that its cultivation beyond the 'merely aesthetic' sphere would "presuppose a race of Titans", such as Prometheus and Atlas, and that this might prove detrimental to the rest of mankind. Yet, unlike Kant, and despite these concerns, in *Clara*, *Bruno*, and *The World Ages*, Schelling goes on to broadly indicate what he means by the general development of aesthetic intuition and creative genius beyond the confines of the fine arts. This hinges on his understanding of what an idea is, an understanding that radicalizes what Kant already glimpsed in his exposition of "aesthetic ideas."

The Greek word *eidōs*, which we translate as “idea”, originally means the appearance, aspect, or view of a thing. This is not a quirk of the Greek language. It is also true of the two most commonly used words for “idea” in the Indo-European linguistic cousin of Greek, namely Persian, where both the native word *angareh* and the Arabic-derived *tasavor* stem from roots meaning “view” (*negar*) or “image” (*tasvir*). According to Schelling, the *ideas* of things are not abstract concepts. If one can imagine seeing many birds of prey, including one evolved from a completely different genetic lineage on another planet, and being struck by some gestalt that made each of them a “bird of prey” despite all of their physical differences, this would not be an abstract concept. One could paint this gestalt in very elemental strokes, in a way that different people would see a hawk or an eagle or a falcon in the brush strokes, but all of them would see a “bird of prey.” An imaginal principal type or archetype of this kind is ontologically prior, Schelling argues, to both the abstract concept and the physical being. These ideas are the *morphe* or formal causes at work in the organic development of various species of plants and animals, as well as in the formation of crystals or metals. Anticipating Heidegger, who occulted his source for these notions, Schelling even observes that certain places and epochs have an ideal dimensionality in a way that defies attempts to flatten them in terms of the homogenous grid of Cartesian space-time.

When the Alchemists spoke of transmuting things into “gold” they were referring not to the metal ‘gold’, but to the *chrysos* within all beings. *Chrysos* is the Greek word for gold and the word *chrysalis* is intimately related to it. Gold, the softest of metals to craft, is a metaphor for the malleable *morphe* within all beings. Schelling concedes that what he is searching for is a new Alchemy wherein the aesthetic intuition is used to apprehend the ideas of things and then to modify those ideas, and consequently the beings in Nature that are informed by them, through crafting expressions of those ideas that gradually resonantly modify the ideas themselves. This postulates an inheritance of artificially acquired characteristics, but based on a keen insight into the legitimate morphological possibilities or latent potentiality of a type of being whose instantiations are subject to modification.

This was, in Schelling’s view, what Hermetic Renaissance thinkers such as Giordano Bruno were really after. Schelling, who dedicates an entire dialogue to the

memory of Bruno, thinks that academic Platonism distorted what the *ideas* or *forms* really were for Plato and for the Pythagorean tradition that he belonged to, a tradition that Renaissance alchemists traced back to the founders of ancient Egypt. Schelling's meditations on the titanic monuments of Egypt evince his conviction that they are legacies of a higher state that man has fallen from, a world age wherein we had occult powers that are now as ruined as these monuments. Yet he does not want to go backwards to simply restore Hellenistic Hermeticism or even the Hermetic Alchemy of the Renaissance. That wisdom was a legacy from the world age before our own, whereas what Schelling is seeking is the Craft of the new age to come.

Schelling writes about a coming generation of scientists with the souls of artists becoming a new spiritual leadership for mankind. Their investigations would be naturalistically grounded, unlike the spiritualists of his time with their impractical flights of fancy. They would begin from the Earth and a careful observation of everything about organic development that defies the prevailing mechanistic model. Since the unconscious wellspring of the ideas vital for the morphological development of all natural beings is abyssal, in other words inexhaustible, and because the abstract concepts employed by the sciences are also only derivative of these aesthetic ideas, Art is destined to surpass and encompass the empirical sciences. This transformation of Science by Art, which allows Science to outgrow reductionist mechanism, will also mean its unification with Religion. Schelling sees the artist-scientists of the future as poets who compose the divine mythology of the new age. The burning of Schelling's hero, Giordano Bruno, was not just one of many instances of Catholic persecutions of Renaissance occultists. Bruno, who had the political backing of some of the most powerful principalities of the Renaissance, was on an evangelical mission to supplant Judeo-Christianity with the kind of unification of Science and Religion that Schelling has in mind. It would have led to a true Renaissance, a futuristic neo-pagan civilization.

3.1 Otherworldly Aesthetic Ideas

The line of argument in the third critique that most concerns us here begins with Kant's distinction between the pleasant and the beautiful. The *pleasant* concerns both animals and men; the *beautiful* only men, but also in their animal nature; and the *good*

concerns rational beings in general. In other words, the *beautiful* pleases without any compelling interest of sense *or of reason*.¹ The judgment that an object is beautiful is unique in that, apart from concepts, it posits its universal validity, not an objective validity but a subjective one. In other words, one presupposes that every subject would either assent to this judgment or be mistaken for not doing so.² As regards the *pleasant*, everyone has his own taste based on his proper sensibility. However, where the *beautiful* is concerned, it would reduce the very idea of *taste* or aesthetic judgment to nonsense if we were to accept that any object may be beautiful to a certain person but not to another. That which only a particular person or other may find charming should not, on that account, be deemed “beautiful.”³ This is not to suggest that we arrive at the beautiful by opinion polling. The tasteless majority may be mistaken about what a minority exercising aesthetic judgment knows is, *in fact*, beautiful.

Kant remarks that the way in which the aesthetic universality of a judgment that an object is beautiful extends to the whole sphere of judging persons without having a logical validity and without uniting the predicate of beauty with the concept of the object in question, reveals something of interest to the transcendental philosopher concerning a non-conceptual property of our cognitive faculty that would otherwise have remained unknown. The judgment of the beautiful is non-conceptual in that no one can be led to it by any rule or set of rules. It is a judgment that cannot be arrived at through reasoning. Each must submit the object to his senses and yet each may pronounce a judgment valid for all others after having assessed the object.⁴

Since the apprehension of the beautiful cannot involve a judgment according to the categories, whereby what is sensuously intuited is structured according to certain concepts, Kant argues that the beautiful must instead catalyze a “free play” of the cognitive faculties. Moreover, this dynamic non-conceptual cognition must be communicable among subjects without the mediation of concepts or reasons.⁵ This inner-relational cognitive character of aesthetic judgment has to do with the fact that the beautiful has no purpose, whereas both that which is of interest on account of its being pleasurable and that which is of interest on account of its being good are objects whose very concept implicates an end-directed nature (whether the end be sensible pleasure or moral perfection).⁶ The judgment of taste rests on the a priori grounds of a quasi-

purposive aim to perpetuate itself, namely to extend the free play of the cognitive powers. This manifests itself as the purely contemplative quality of the appreciation of the beautiful, wherein without any practical orientation whatsoever, we *linger* over it and are, as it were, enchanted or entranced.⁷

The feeling (inner sense) of the harmony of the interplay of the mental powers is what lies in the place of the concept as the “determining ground” of aesthetic judgment.⁸ The subjective universality of aesthetic judgments, in other words, the way in which one may rightly presume that everyone else *ought* to agree with one’s estimation of what is beautiful, must be grounded in a *common sense* which is not a common understanding. The latter judges on the basis of shared concepts, even if these principles are commonly represented only obscurely. By contrast, a common sense that would be the basis of aesthetic judgment would be a non-conceptual, non-external ‘sense’ arising from the free play of our cognitive powers and allowing for a communicability, unmediated by reason, of our state of mind with others.⁹ In other words, this ‘sense’ that Kant posits is an extrasensory perception that is telepathically communicable.

Judgments of beauty are not simply the antithesis of the kinds of judgments of ugliness that have to do with asymmetries in things on account of which we sense that their purpose has been contracted or impeded, such as with deformities in animals, badly designed buildings or gardens, etc. This is why the appreciation of basic geometric forms is not a proper appreciation of the beautiful. It is a function of the understanding, which grasps the goal-oriented concept of a thing. Rather, taste can be most readily discerned at work where the imagination is pushed to its limits, for example, where the beautiful verges on the grotesque and yet just barely averts it, so that we see imagination express itself lawfully where there is no law to follow.¹⁰ This is the same lawless limbo that Kant seemed to abhor as the domain of the paranormal in *Dreams of a Spirit-Seer* and to deny as an affront to reason in *Religion Within the Limits of Reason Alone*.

There can be nothing like an objective principle of taste, which would allow one to syllogistically derive the judgment that an object is beautiful from its concept. No grounds of proof whatsoever may persuade one prior to direct experience.¹¹ The imagination can awaken the understanding without the aid of concepts and communicate itself, not as a thought that could be put into words, but as a more inward state of mind

that is in some way “purposive” or intentional without conforming to a given purpose or end implicit in the concept of any object.¹² In light of the relationship between Nature and the nature of genius, we can see that Nature is not simply something *like* an artwork, it *is* an artwork, but one of a “superhuman” magnitude.¹³ Consequently, the genius who channels Nature’s creative force is something more than a mere human being. Here we can see Kant’s departure from the egalitarian and democratic concerns that in large part motivate his suppression of the spectral in *Dreams of a Spirit-Seer*.

Works of art should have the same effortless beauty that Nature does; they should have an organic lawfulness that is too complex to analyze and yet that is not at all the outcome of a belabored adherence to arbitrary laws. If the design of a work of art were aimed at the production of a certain type of object, then the art or artisanship that attained this aim would only please us in a way that would be conceptually mediated. Such an object would please as the *mechanical* does, and it would not provoke the free play of the beautiful. The purposive character of the beautiful work of art ought to be so seamless that if one could say it appeared designed, it would appear so only in the sense that organic nature strikes us in this way as well. Rules learned by the artist in the course of training at various schools should vanish without a trace in the work; they should be absorbed in it.¹⁴ None of this is to say that skill, aptitude, and trained judgment play no role in the work of art. However, that we sometimes find works of genius that are for all that tasteless but never find that acquired skill or refined taste alone can produce a work of genius, suggests to Kant that the genius of the artist and the skill of the artisan are separable and that the former is the necessary condition of beautiful artworks.¹⁵

Kant concludes that *genius* is the “talent” (natural gift) or innate disposition (*ingenium*) through which nature gives the rule to art, on account of which the beauty of an artwork is as original and seamless as the beauty of nature. It is Nature acting through the nature in the subject that produces beautiful art, which is always a product of genius – of a talent for producing that for which no definite rule can be given or learned, regardless of the artist’s aptitude or lack thereof. Furthermore, it is not enough for a work of genius to be “original”, since there can also be original nonsense, it must be both original *and exemplary*. In other words, it cannot be imitative and must establish its own standard of judgment both for itself and for other works in its wake.

Finally, and perhaps most significantly, the genius at work in beautiful art will admit of no scientific explanation of its genesis. It is here that, at least implicitly, Kant is reversing his position on the paranormal, whether he realizes it or not – a fact that would be more widely recognized if his treatments of the subject were read alongside the third critique. Insofar as the nature of genius is Nature acting through the subject, this is as much as to say that there is an aspect of Nature that is both open to direct experience and that lies beyond the concepts of the categories, but is not of the abstractly posited *noumenal* “world of understanding”. It is rather, the “pneumatic” world of Swedenborg but now conceived of, not as dualistically distinct from nature, but as one with it on a deeper level than can be fathomed by reason and its concepts. Nature does not prescribe rules to science, but only to beautiful art. All of this also means that the *genius* can neither devise a rule-governed or formulaic method by which to repeat his own past artworks, nor could he formulate a set of rules or methods that would allow others to replicate his efforts. He himself would not rationally *know* how he arrived at the ideas that he did. This harks back to the original meaning of the word *genius* as a guardian spirit given to a man at birth as a source of inspiration. It is the Greek *daimon* of Socrates.¹⁶ Kant refers to this spirit as the “animating principle of the mind”, and it is what is lacking when we judge that for all its technical perfection, or even despite a very tasteful presentation, some poem, or person, or conversation is “without spirit.”

More precisely, the faculty whereby this spirit puts the mental powers to play without the mediation of rational concepts is “the faculty of presenting *aesthetic ideas*.” The imagination uses the material supplied to it by nature in order to surpass nature by generating ideas that lie beyond the bounds of experience. No concept can be adequate to the internal intuition of these ideas, but aesthetic ideas are capable of indefinitely expanding (and hence redefining) rational concepts that they spawn and that attempt, unsuccessfully and yet generatively, to clearly grasp (*griefen, begriff*) that which engendered them. An aesthetic idea is a representation of the imagination that occasions much more thought than can be reduced to any one concept or set of concepts, and consequently, an imaginative idea that – unlike a rational idea – cannot be fully encompassed by language and rendered intelligible thereby. Prometheus and Atlas, as I am concerned to reveal them in this project, would in Kant’s terms be “aesthetic ideas.”

Kant must take poetry to be a very special type of discourse, distinct from language in general, because he goes on to say that the poet manifests the faculty of aesthetic ideas par excellence. The poet's imagination is capable of opening out in such a way as to appreciate various representations of the same idea, whose relationship to one another is not definable in the way that the relationship of multiple instantiations of a concept to the concept of which they are instantiations can be logically presented. These variations of aesthetic ideas are not graspable in terms of any set of shared logical attributes.¹⁷ Even if it outstrips the concept-formation of objective cognition, the subjective exercise of aesthetic ideation by the genius quickens his cognitive powers.¹⁸ This relationship between imagination and understanding that takes place in the genius is not teachable by any science, it cannot be learned industriously, and what proceeds from it does not admit of mechanical reproduction. Only a subsequent genius really learns from a prior one, and only insofar as the former supersedes his predecessor as exemplary, through the same intuition by means of which he appreciates the earlier work of genius:

[G]enius is the exemplary originality of the natural gifts of a subject in the *free* employment of his cognitive faculties. In this way the product of a genius (as regards what is to be ascribed to genius and not to possible learning or schooling) is an example, not to be imitated (for then that which in it is genius and constitutes the spirit of the work would be lost), but to be followed by another genius, whom it awakens to a feeling of his own originality and whom it stirs so to exercise his art in freedom from the constraint of rules, that thereby a new rule is gained for art; and thus his talent shows itself to be exemplary.... A genius is a favorite of nature and must be regarded by us as a rare phenomenon...¹⁹

The significance of this cannot be overestimated since, as Kant claims, *it is through aesthetic genius that "ideas are found for a given concept" in the first place* – even if, they are necessarily indistinct at the outset, so that the same aesthetic idea could yield different concepts that are rationally apprehensible, communicable, useful, and learnable. In other words, the ideas from out of which concepts are defined ultimately emerge from “the ineffable element in the state of mind” of a genius which, whether in the medium of poetry or painting or sculpture, can seize “the quickly passing play of imagination” and cohesively condense it into something symbolic or archetypal that

reaches others on a pre-rational level and from out of which they can develop concepts, presumably including those rational criteria defining proper scientific method. In science, “clearly known rules must go beforehand and determine the procedure.” Unlike the artistic genius, the scientist does not have insight into the free play of cognitive powers that is prior to the determination of these rules.

3.2 The Occult Art of Unifying Unconscious and Conscious Activity

Taking the aesthetics of Kant as his point of departure, Friedrich Schelling argues that “the sanctity and purity” of art lies in its not being a means to any end outside of itself, such as sensuous enjoyment, usefulness or even morality. Only a barbarous culture uses art as a means for sensuous enjoyment, and only a society which views economic achievement as the highest end of the human spirit would demand that art should be ‘useful.’²⁰ Aesthetic production, just as any free action, is sustained by an infinite separation of conscious and unconscious activity. According to Schelling, in aesthetic production these infinitely divergent activities are unified in a finite product. This finite presentation of the Infinite is *beauty*, which is the defining characteristic of any true work of art. Schelling acknowledges that there are also *sublime* works of art. These differ from beautiful ones in that the infinite contradiction is not resolved in the artwork itself, but in its viewer. However, both the beautiful and the sublime involve the unconscious discernment of a magnitude (depth, or dimension of meaning) in a certain object, which cannot be comprehended by conscious activity. This sets conscious and unconscious activity at odds with each other, such that only an aesthetic intuition can replace the contradiction with a realization of the pre-established harmony of the two activities.²¹

Schelling believes that since beauty is only produced by the resolution of an infinite contradiction (for consciousness), there is no real beauty in nature and any apparent natural beauty is accidental. Consequently, he insists that Nature should never be the standard for art to imitate. Rather, the perfection of the work of art is the standard against which to judge any mere semblance of beauty in Nature.²² Schelling notes that while there is no one who lacks at least a little poetry in his nature, even a potential genius graced by an overflowing poetic nature can never produce real art unless he can tame his gift with the discipline of technical proficiency. On the contrary, a person highly

skilled and studied in the works of great masters, and the techniques they employed, can produce some kind of artwork. Nevertheless, the belabored superficiality of the latter will present a striking contrast with “the inexhaustible depth which the true artist... puts into his work involuntarily and which neither he nor anyone else is able to penetrate completely.”²³ Every true work of art is sufficiently profound as to allow for infinite interpretation, whereas a superficial work of artistry merely presents a literal record of the artist’s conscious activity and intentions.²⁴

Schelling argues that no genius is necessary in the sciences. While it is not impossible for a scientific problem to be solved in a genial way (Kepler on gravitation), the same problem can also be solved mechanically (Newton on gravitation). Only in art is genius always required for a resolution that can be arrived at by no other means. Consequently, it is difficult to tell when genius is at play in the sciences. Nevertheless, Schelling lays out two criteria. Firstly, genius is involved where a scientific theory is not laboriously developed or built-up piecemeal, but where a vision or idea of the whole *precedes* the discovery and examination of the parts that constitute it. Secondly, genius may also be at work where a scientist makes statements whose meaning he could not have rationally or wholly comprehended based on his present store of knowledge and his historical circumstances. These two cases involve the kind of resolution of infinite contradiction through the conspiring of conscious and unconscious activity that is characteristic of artistic genius.²⁵ In summary, Schelling states: “Genius is differentiated from everything that is mere talent or skill by the fact that it resolves a contradiction which is absolute and resolvable by nothing else.”²⁶

Schelling maintains that art cannot ever be subordinated by science, though he recognizes that of all endeavors the latter is closest to art on account of its disinterestedness. The two are related in being diametrically opposed tendencies. What is more significant is that, according to Schelling, because science is a means without content that always seeks beyond itself, it is destined to become a mere tool for the creation of art.²⁷ Schelling acknowledges that philosophy and all the sciences that grew out of it were originally engendered by poetry but he believes that they are also destined to be re-assimilated by poetry. He identifies mythology as an intermediate stage in the evolution of the sciences out of poetry, and he suggests that the rise of a new mythology,

born not of a single individual, but of a generation acting as one, will mark the transitional phase of a return of the sciences to the wellspring of poetry.²⁸ He describes how the objective world itself *and* our recognizably voluntary effects on it are *both* active productions of the ego. The difference is that the former is a production without consciousness, and the latter, with consciousness. Thus the pre-established harmony involves a “confluence” of conscious and unconscious activity of the ego. Schelling believes that only the work of art manifestly testifies to the pre-ontological reality of such a confluence in the transcendental ego.²⁹

According to Schelling, the uniqueness and “magical charm” of organic nature lies precisely in the fact that we marvel at how things that seem so purposive are produced by blind mechanism. He does not believe that this purposive appearance should be ascribed to a conscious design. If it were willed by us together with the natural laws that regulate it, then we would paradoxically be willing to be deprived of (even the appearance of) free will. To ascribe Nature to design by a non-human creative principle that represents a world for itself, would contribute nothing to explaining how *we* are able to affect Nature despite its apparently objective existence and deterministic laws. Schelling argues that teleological explanations of either kind err in making the purposive concept precede the object, rather than recognizing in nature’s blind perfection “an original identity of conscious and unconscious activity.”³⁰

Most significantly, this means that such an original identity cannot even lie in the ego itself, because the identity must already be ruptured into the subject-object divide in order for the ego to have self-consciousness (defined in the face of an externally existing world). Schelling identifies the *artistic* intuition as the sole means whereby conscious and unconscious activity become objective (externally manifest) for the ego at the same time.³¹ It is for this reason that Schelling calls art: “the sole true and eternal organon as well as document of philosophy, which sets forth in ever fresh forms what philosophy cannot represent outwardly, namely, the unconscious in action and production and its original identity with the conscious.”³² In other words, for Schelling, no philosophy in and of itself can ever attain universal validity. For philosophy to achieve objectivity means that it has become art, and conversely, any art deprived of objective existence becomes mere philosophy.

In the Tenth of his *Letters on Dogmatism and Criticism*, Schelling responds to his colleagues that he is in favor of removing any vestige of the illusion that one can believe in an objectively existing intelligible world at the same time as retaining the free will of an absolute subject. He argues that the objective power of nature, if acknowledged, threatens our free will with total annihilation. This can only be genuinely accepted by someone “who can bear the thought of working at his own annihilation, of doing away with all free causality in himself, and of being the modification of an object in whose infinity he will find, sooner or later, his own (moral) extinction.”³³ Such an absurd conclusion is not *theoretically* refutable. Thus any philosophical system that upholds free will must be *practically* embodied as an *art* or way of life [*Art des Lebens*].

3.3 Storming Heaven: A Renaissance of the Titanic Craft

Schelling sees Greek tragedy as the supreme portrayal of decisively heroic action against the objective power of nature. Though the hero must ultimately submit to fate, and knows this from the start, that he is punished for his choice to go down fighting honors him with the acknowledgment of a certain kind of freedom by making him responsible for his failure. Schelling believes that the Greeks, who are traditionally considered the most ‘natural people’ of Western civilization, set the standard in demonstrating what happens when man exceeds the bounds of Nature. By the latter he means, when the subject’s representational relation to the objects of nature is ruptured by the insight of true genius. The apparent mastery and manipulation of nature by the ‘free will’ of a rational subject removed from it, is thereby shattered. The genius intuits his oneness with Nature from within it, and must either be overpoweringly suffocated by it in such a way that his individuality is snuffed-out, *or* he must overpower the objective laws of nature by rendering them merely apparent, while he himself assumes the objective and absolute existence of a deity. The genius, whose transcendent insight does not allow him to rationally de-limit the extent of Nature as object with respect to his subjective being, must consequently battle all the powers of heaven and earth merely to survive.

This is the perennial tragedy wherein the Greeks envisioned Titans such as Prometheus and Atlas waging war against the Olympian gods, for control of the Earth. Schelling mentions Prometheus explicitly: “Prometheus [is] will, unconquerable... which

for that reason can resist God. ...Prometheus is the thought in which the human race, after it has brought forth the world of gods out of its inner being, returning to itself, becomes conscious of itself and its fate.”³⁴ The Promethean genius chooses to enter the fray of this impossible battle against Olympus because, though he knows it can hardly end in anything but his annihilation, the highest work of art will thereby be produced. He strives to bring into being a beauty so perfect that it sets the standard even for natural beauty. However, Schelling warns that:

...such a fight is thinkable only for the purpose of tragic art. It could not become a system of action even for this reason alone, that such a system would presuppose a race of titans...it would turn out to be utterly detrimental to humanity...would it not be easier to tremble at the faintest notion of freedom, cowed by the superior power of that world, instead of going down fighting? ...The man who would obtain his existence in the supersensuous world by begging, will become the tormentor of humanity in this world, raging against himself and others. Power in this world will compensate him for the humiliation in that. Waking up from the delights of that world, he returns into this one to make it a hell.³⁵

Schelling believes that genuine freedom can only be wrought in the defiance of apparently objective natural laws, as mythically represented by a titanic struggle against the governing powers of the cosmos (the gods). He claims that a genuine life of freedom is impossible for the subject unless he *actively embodies* a defiance of the objectivity of external reality. According to Schelling, a genius would have to realize that, apart from such action, he lives a life working at his own annihilation as a mere mode of an objective reality that he articulates in part, but in no way controls. To restrict the kind of activity that would liberate one from this absurdly pre-determined life to the moments when one is painting within the confines of a canvas, or writing a poem on a piece of paper, is not plausible.

Schelling would probably agree that, at least for the genius, art is inseparable from life. We also see his recognition of the possibility of a real titanic struggle, if only negatively, in his concern that it would be terrifyingly tormenting for those who engaged in it, and that it posed the danger of their tyrannizing over lesser men bound within the natural world in order to compensate for their own disadvantage in the spiritual realm.

That Schelling even has such concerns means that he sees the possibility of winning one's freedom in this way as something more than a myth. When Schelling writes – “it would presuppose a race of Titans” such as Prometheus and Atlas, it does not necessarily follow that he means that there can never be one. Rather, the concerns he goes on to express make it more likely that by this he means that perhaps there *ought* not to be one.

This may be connected to Schelling's view that since all genuine works of art open unto the Infinite, in a certain sense there is really only one absolute work of art, which manifests in many different instances, only because “it should not yet exist in its most original form.”³⁶ Schelling explains that though the work of art issues forth from the same original opposition as the world itself, the latter manifests the resolution of this opposition only in the totality of its existence. In other words, no individual product of Nature reflects infinity from within itself the way that each and every work of art does. However, these artworks are not yet *the* absolute work of art. Could this total work of art (*Gesamtkunstwerke*) be what Schelling otherwise calls “an absolutely opposite system” to that of the natural laws of the objective world?

Schelling writes: “In *representing* the object to himself... he has nothing to fear...but as soon as he does away with these limits... as soon as he himself has strayed beyond the limit of representation, he finds himself lost. He has done away with its bounds; how shall he now subdue it?”³⁷ According to Schelling “Reason must renounce either an objective intelligible world, or a subjective personality; either an absolute object, or an absolute subject, freedom of will” *unless* one practically embodies an entire order that overthrows that which has been ordained by fate, thereby redefining ‘reality’ from *within*.³⁸ To take Schelling's view seriously would mean becoming the lawgiver of Nature in a far more practical and violent manner than the merely intellectual idealist recognition of a transcendental identity between human consciousness and the natural world. Strongly pointing in this direction is Schelling's claim that Science will become a tool in the hands of Art.³⁹ Its praxical essence as *techne* (craft, technology) will be revealed within the horizon of an irreducibly aesthetic dimension of meaning. This would require that physical science, which is only effective within the bounds of the laws of Nature recognized by it as self-imposed limits, somehow become a science (*scientia* or

“knowledge”) of the soul governed by aesthetic intuition and not crippled by the conventions of rational methodology.

In fact, such a science would not need to be invented so much as redeemed and renovated. The Cartesian paradigm came to predominate in ‘*the scientific method*’ only after Alchemy disintegrated into the disparate sciences that were uprooted from it. Some of the greatest scientists of the Renaissance and the early modern period were still practitioners of Alchemy or applied Occult Philosophy. The foremost of these was Giordano Bruno, who faced incessant persecution by religious authorities for studying “occult” phenomena and abilities. He had, indeed, written extensively on psychic ability and the means to cultivate it. The Holy Inquisition accused Bruno of practicing Magic and Witchcraft and of holding a number of heretical views – including belief in reincarnation and extraterrestrial intelligence. His having preached the intellectual and spiritual equality of women to men and his disregard of economic class distinctions also cannot have made him too popular with the ecclesiastical establishment. On February 17, 1600 Giordano Bruno was burned at the stake by officers of the Catholic Church in a central market in Rome. Schelling wrote a dialogical book called *Bruno* in his honor. It is in this book dedicated to Bruno, and in another dialogue by the name of *Clara* that it becomes unmistakably clear that despite his apprehensions, Schelling does advocate the restoration of Alchemy as a spiritual *art* or master Craft [*techne*] that encompasses and supersedes the modern natural sciences but is informed and grounded by their naturalism – unlike Hellenistic Alchemy or even that of the Renaissance. Furthermore, Schelling’s last uncompleted work, *The World Ages*, affirms the occultism that pervades *Bruno* and *Clara* and it sets the alchemical ideas of those works in the context of a new metaphysics that Schelling saw as the culmination of his life’s project.

Alchemy or *Al-Kemiya* is derived from *Al-Kemet*. The *Al* prefacing the word is an Arabic article. The native name of ancient Egypt was *Kemet* and the Egyptians were known as *Kemetians*. Plato derived much of his thinking, including the basic theory of forms, from the Pythagorean secret society of which he was a member. Pythagoras in turn spent 22 years in the temples of ancient Egypt learning most of what he would later teach.⁴⁰ Plato honors this heritage with repeated references to Egypt throughout his dialogues, including Socrates’ characteristic exclamation: “By the dog of Egypt!” The

metaphysics of the *Timaeus* is expounded against the dramatic backdrop of an Egyptian temple, and the legend of Atlantis in *Critias* comes to us from Plato via the hall of records maintained by the sages of Egypt.⁴¹

In *The World Ages*, Schelling claims that our lower self is there to serve as a mirror through which the archetypal image of the primordial world before time might come to distinguish itself in consciousness.⁴² Schelling refers to this primordial world as “the first time.”⁴³ This is the same phrase that the ancient Egyptians used for their ‘golden age’ of *zep tepi* (“the first time”), which was not so much another era, as a simultaneously existing temporal dimension to which the Pharaoh returns after death. If the empty granite coffer in the King’s Chamber of the Great Pyramid was ever used for anything related to mortuary rites, it was not for the literal entombing of a Pharaoh, but as a place where he undertook a shamanic journey inside an artificial mountain designed to subjugate nature and concentrate psychical power by establishing a rapport with ‘the other side.’ In *Clara*, Schelling claims that mortuary festivals and rites might actually have an effect on the spirit world or at least serve to maintain the connection between this-worldly experience and beings now in an other-worldly state: “The ancient Egyptian [mortuary] practices have something terrible about them, but they are based on a thought that is in itself true and correct.”⁴⁴ If space and time do not have Cartesian uniformity, and if there are particular places that a certain great time has enfolded with occult power, then the titanic ruins in Egypt would certainly be among them, and Schelling does believe that there are such places.⁴⁵ In *The World Ages*, Schelling remarks on the primordially titanic character of ‘Egyptian’ art and architecture. He might be thinking foremost of the ‘proto-Egyptian’ megalithic structures of the Sphinx and Valley temples as well as the Osireon at Abydos. On account of being totally unmarked, unadorned, and austere geometric, they are conferred with an especially timeless and inhuman quality.⁴⁶

In *Clara*, Schelling goes so far as to equate unlocking the mysteries of such places with unleashing psychical powers that have been suppressed in mankind ever since a catastrophic fall from a higher state of being in immeasurably remote antiquity.⁴⁷ Schelling appends to this passage a marginal note of his own that reads: “A completely different world buried therein than we suspected. Odyssey of the Spirit.” In other words, what remains buried at Giza and elsewhere in Egypt cannot be discovered without

unlocking another kind of sight and restoring a different kind of science grounded in that vision. Those monuments demand of us that we look to regaining, by means of a forgotten magical art, staggering psychical powers that we have long lost. Schelling makes this clear through an exclamation that he puts in the mouth of the good doctor in *Clara*. This proto-Van Helsing claims that a human being senses indignation in the face of the ravages wrought upon him by the forces of nature: “Because [on some level he ‘knows’ that] *he* should move everything... because he is not conscious of the strength in his inner being through which he could rule everything and through which he could be free of everything.”⁴⁸ In *The World Ages*, Schelling expresses this same basic call for the cultivation of latent abilities in the first person and without such hyperbole as he allows himself in the dramatized context of *Clara*: “It is not enough that forces (or abilities) be present in a man; he must recognize them as his own, and only then is it possible for him to grasp onto them and put them to work and into effect.”⁴⁹

Schelling is not, however, a traditionalist nostalgically looking backwards. He is after a post-materialistic science *of the future* that retains its hard-won naturalism while retrieving aspects of the ‘Egyptian’ magical art of *Alchemy*. Schelling fears that it is too early to lift the veil on this science of ideas by elaborating on its workings in detail.⁵⁰ Schelling sees his own role as preparatory, for the development of such a science still remains, in his view, the task for a future man:

With such progress, perhaps a long-pondered attempt might be hazarded, which would help make ready this future, objective presentation of science. Perhaps he will yet come, who will sing the great heroic poem, encompassing in spirit (as is reputed of the seers from times gone by) what was, what is, and what will be. But this time is not yet at hand. As its harbingers, we do not wish to pluck its fruit before it is ripe, nor do we wish to misjudge our own. This is still a time of struggle.⁵¹

These apologetic and cautionary reservations accepted, Schelling does paint with broad strokes some elements of the coming titanic Craft. Let us begin with the dialogue that explicitly links Schelling to Giordano Bruno and the esoteric heritage of Egypt that we have just touched on. From section 2:223-227 of the dialogue *Bruno*, through the character of Anselm, Schelling lays out the establishment Platonist view that ideas are

eternal and unchanging concepts separate from and somehow in perpetual conflict with the productive nature in which they are always inadequately instantiated.⁵² While even here truth is equated with beauty (an equivalence to which Schelling earnestly adheres), only the eternal ‘ideas’ are taken to be truly beautiful – not their instantiations. Still, from 4:227-234 we see Anselm claim that the artistic genius can, through the connection of his idea with the ideas of things, somehow reflect the infinite in the finite medium of a work of art. The more deeply his idea – his spiritual essence – penetrates into the ideas of other things, the more his artworks will be universal (such as the work of Goethe and Shakespeare) and not merely an expression of accidents and contingencies that have shaped his idiosyncratic individuality.⁵³ For Anselm – the academic Platonist – it remains the case that this intuition and expression of the ideas is unconscious in the case of art, so that the artist is a mere tool of the absolute, whereas the philosopher alone is capable of consciously grasping the ideas. The philosopher’s relationship with the ideas is esoteric, while that of the artist – even the universal artist – is exoteric.⁵⁴

Schelling has the character of Bruno reject Anselm’s strict distinction between the material and the spiritual, the finite and the infinite, and argue that the unity of truth and beauty is grounded in a spectral non-duality of these notions. Around 4:239, Bruno begins to advance an *imaginal* or imagistic understanding of *ideas*.⁵⁵ By 4:243-247 it becomes clear that the *idea*, as understood by Schelling’s Bruno, is not so abstract as the bare concept that Anselm takes it to be. Rather, the *idea* spectrally conflates properties of the conceptual with that of the multiplicity of objects through which a given concept is intuited.⁵⁶ At 4:247-252 Bruno explains that both things and concepts are abstracted aspects of *ideas*; concepts and things correlate with one another but they cannot exist independently of the *phenomenal* being of individual ideas.⁵⁷ The idea is a living union of concept and thing; its generality or status as a *type* is a concrete generality whereas the abstract concept has only a formalistically empty generality.⁵⁸ Ideas are *arche* or principal and overarching *types*, that is, *archetypes*, but ones that do not abstractly stand over and against their ‘copies.’⁵⁹ Nothing is entirely ‘real’ and nothing is purely ‘ideal’ (where ‘ideal’ is misunderstood in the academic sense).⁶⁰ Things are never entirely separate from consciousness, and consciousness is never totally devoid of sensuousness.⁶¹ Some critics have reproached Schelling for “almost always being in suspense between

idealism, realism, and even materialism.”⁶² In the guise of *Bruno*’s Alexander, he is certainly the advocate of Giordano Bruno’s mystical hylomorphism.⁶³ The so-called ‘mental’ realm is just as *phenomenal* – i.e. sensible and qualitatively variegated – as the ‘material’ realm.⁶⁴ ‘Extrasensory perception’ (ESP) is still *sensory*. The psychical and somatic are relative dimensions of the spectral *idea*.⁶⁵

Beginning already in early Platonism, space was interpreted as an empty and neutral background – a *receptacle* wherein dead matter is mechanistically in-formed by abstract concepts. At 4:315 in *Bruno*, Schelling has Alexander deconstruct and repudiate this degenerate version of the theory of forms. In its place he offers a vision of the ideas as an organic interconnection of individuals in a world before time, before their actualization in corporeal embodiments that sharply distinguish one from another.⁶⁶ Schelling claims, through Alexander, that the conception of dead matter – wherein things do not participate in each other’s being and are cut off from one another, with only extrinsic relations among them – is so absurdly unnatural that it has driven many sensitive souls to feel as if “the barbarian idolater or the primitive totem-worshipper” were “in possession of superior philosophical and religious sensibilities.”⁶⁷ Schelling goes so far as to claim that the psychotic break between the spiritual and natural dimensions of existence are to blame for the decline of the French Revolution, with its aspirations of liberation, into the murderous Reign of Terror.⁶⁸ Behind this political development he sees the metaphysical psychosis of French Materialism and Cartesian Dualism. In other words, he would concur wholeheartedly with the essential thrust of the last chapter.

For Schelling (speaking here through the medium of Bruno) the *idea* is not accessible to finite cognition; with its confluence of what in logical terms can only be deemed opposites – such as possibility and actuality, unity and multiplicity, limitation and unbounded reality – it cannot be understood by rational thought alone.⁶⁹ The implication is that, to the contrary of what Anselm believes, artistic genius is a prerequisite to being a genuine philosopher and thought can never dispense with, outstrip, or wholly comprehend aesthetic intuition. One may have even audio-visual ‘intuitions’ of ideas.⁷⁰ At 4:328 in *Bruno*, Schelling uses an alchemical formulation when referring to this intuition of ideas that are substantial and formal at the same time, saying that to

discover this “is to discover the absolute center of gravity. To know this is to uncover the original metal of truth, as it were, the prime ingredient in the alloys of all individual truths, without which none of them would be true.”⁷¹

Yet, as has already been pointed out, Schelling is not simply looking backwards. The new Alchemy that he seeks is even more grounded in naturalism than that of Giordano Bruno. We see this most clearly in *Clara*. There Schelling is fairly clear that the spiritual science he is seeking is not a distinct science of spirits but a spiritualization of “the earthly sciences” so that research may be able to “transition” smoothly and freely between the “natural field” and the “spirit world”, which are deeply interconnected by processes of organic growth.⁷² Provocatively, he speaks of the spiritualization of science as synonymous with a bringing of philosophy back down to *earth* – but not the ‘Earth’ of materialists.⁷³ Interestingly, while he believes an inner transformation of natural beings is possible, Schelling draws a distinction between the organic unity of each individual soul and the spectral interdependence of all other natural beings within the context of the organic whole of the Earth’s soul. The Earth is a single spiritual being for Schelling, and the only living beings emerging from out of it that can go on to develop a degree of organic autonomy are humanoid beings. Schelling has great reverence for the Earth as a spiritual mother: “Even when we scale down our estimation of this life to its appropriate measure, don’t we privately have a feeling that tells us we owe this Earth a certain devotion and that this Earth shares with us one fate and one hope?”⁷⁴

The formal distinction between semi-autonomous human souls and the earthly soul of other natural beings accepted, Schelling offers this beautiful metaphor for the overall non-duality of nature and spirit: “the temple whose last spire disappears into an inaccessible light is, at its very deepest foundation, wholly supported by nature.”⁷⁵ In line with this view, Schelling holds that nothing should be denied to science – even what has hitherto been seen as the most ethereal – so long as scientists remain faithful to the Earth and proceed step by step in their researches.⁷⁶ He cautions against remedying the temporary shortcomings of the sciences with fanciful flights of the imagination or a superstition ignorant of the natural connections of things, but he also warns scientists that they should not leave what is of most pressing concern to people – the workings and welfare of their souls – for ‘spiritualist’ authors of popular tripe.⁷⁷

Ultimately, the spiritualization of Science will lead to its unification with Religion, through aesthetic intuition.⁷⁸ Through the character of the doctor in *Clara*, Schelling argues that it is possible for science to translate a largely unconscious spiritual intuition – by which he means an intuition of things pertaining to the *spirit world* – into something sufficiently structured in its articulation that it can be apprehended consciously.⁷⁹ Schelling suggests that all things have their own “inner germ of life” (even if it is not as individuated as in humans) so that a new science of life would develop if we could learn to affect physical, chemical, and electrical processes on this inner level rather than merely through external force.⁸⁰ He explicitly describes this as a kind of ‘spiritual chemistry’, so it is quite clear he is talking about a new Alchemy.⁸¹

In an exchange between Clara and the doctor, Schelling at length develops the idea of “something mediate between body and spirit” – a *specter* of a person or what some in his time called a “subtle body.”⁸² Schelling simply calls this “moderate essence between body and spirit”, the “soul” of a person and he suggests that what people mean to say when they talk of “spirits” and the “spirit world” is really the survival of a soul that is imprinted by the qualitative characteristics of corporeal embodiment.⁸³ Unlike the spirit, which is a fickle and transient constellation of psychological characteristics, and unlike the physical body prone to disintegration, the soul that unites the two during life is marked by both and can persist in its distinctive constitution.⁸⁴ Schelling acknowledges that the “spiritual form of the body” can under certain conditions and to a limited extent, break free of the constraining “force of external life” (the potencies of nature at work in the physical body).⁸⁵ This is what is involved when people are able to clairvoyantly “see” their own physical body from a third person vantage point or see things spatially remote as if they are traveling there.⁸⁶ The distant past and even the remote future become clear to a person in this clairvoyant state.⁸⁷ One is able to “remember” the future. “A whole range of [paranormal] phenomena” of other kinds, which would not be possible if there were a strictly dualistic division of mind and body, also become possible in such a condition of spectral release, according to Schelling.⁸⁸

Schelling draws an analogy between the transfer of the soul from the physical body to the spectral body that persists after death and the transition between wakefulness and sleep, suggesting that although something like direct experience of it might be

needed to explain it scientifically it is not in principle incomprehensible.⁸⁹ He compares enduring the capacities of the soul in sleep “to will, love, or detest” to the capabilities of the soul in the disembodied spectral state.⁹⁰ He takes the ability of a mesmerist to, on the one hand, make a person’s hearing superhumanly sensitive, and on the other, to shut them off from all external sensory impressions (even the nearby “rattle of coaches” or “the firing of cannons”) other than the sounds of his soft spoken commands, as evidence that the external filtering or constraining force operative during the dream state is not ‘physical’ in the ordinary sense.⁹¹ Thus just as it can be manipulated without regard to physical organs and brain-based cognitive functions, this sheath can be removed altogether so as to liberate the soul without manipulation of these corporeal entities.

With reference to the view that philosophy is a preparation for death, Schelling maintains that “only he who could do while awake what he has to do while asleep would be the perfect philosopher.”⁹² Elaborating on this maxim, he describes a state of “wakeful sleep or a sleeping wakefulness”, which today is known as *lucid dreaming*, and he says that this condition of great clarity that some may enter into while still alive, is the very same “condition that follows death” with the difference being in that case it becomes “a clairvoyance uninterrupted by a waking up.”⁹³ Communication between diverse souls who are all in this condition would be like telepathic communication between mesmerized persons who are still alive.⁹⁴ Language will not be necessary, but it also will not be possible to use language to hide one’s true feelings and thoughts once all communication is by means of Telepathy.⁹⁵ Souls that are really blind and confused might not have this degree of lucidity. Instead, like those who are utterly incapable of lucid dreaming while alive, they may be bombarded by dreamlike imagery – and to the extent that fears, complexes, and paranoid delusions plague their psyche, this dreamlike experience could have a nightmarish quality.⁹⁶

Interestingly, Schelling’s most elaborate vision of the new Alchemy in *The World Ages*, also takes as its point of departure a similar discussion of the affinity between hypnosis or “mesmeric sleep” and ‘normal’ sleep with its occasional dream imagery. In this other extensive discussion of mesmeric sleep his emphasis is on those paranormal phenomena that mesmerized persons experience, the evocation and exploration of which have long since been suppressed by materialist psychologists in the practice of

mesmerism in order to re-define it as clinical “hypnosis.” Schelling postulates various depths of mesmeric sleep, which are defined by the degree to which the extrinsic over-organization of life forces into the perceptual channels of waking life is de-structured and the internal life forces are allowed to flourish in a state that, from a rational minded perspective, appears more ‘disorganized’ or ‘deranged.’⁹⁷ In a relatively shallow state of mesmeric sleep, the body is able to cure certain ailments that proceed from a dysfunctional over-organization of life forces.⁹⁸ In a medium state of mesmeric sleep, the mesmerized person will be capable of having veridical “visions of future things” (i.e. precognition).⁹⁹ In the deepest state of mesmeric sleep, when contact and communication with the external world is completely cut off, and the mesmerized person appears to be all but dead, her inner life forces will be freed from all external constraint and will be able to enter the spirit world and travel therein (as a specter).¹⁰⁰

Schelling also draws a connection between this death-like deep mesmeric sleep and death itself on the one hand and the “generative act” of sex on the other. He notes how sex has been referred to as a little death and he compares the invulnerability to pain during the height of sexual arousal and climax to the imperviousness to external physical stimuli during a hypnotic trance. In both cases, he speculates, what is at work is a diminishing of “the power of the external life-exponent”.¹⁰¹ Schelling goes so far as to suggest that total negation of this force is possible during such states as mesmeric sleep and the most intense sex, just as it is in death (or Near Death Experiences), so that a man’s spectral body “can become *posited-outside himself*.”¹⁰² He views development of the ability to have Out of Body Experiences (OBE) as desirable.

What is most interesting about Schelling’s discussion of these states, is that he is concerned to emphasize that there is no sharp distinction between mesmeric sleep – induced by a hypnotist – and ordinary sleep, which can have a healing affect commensurate with its depth and which also has been known to involve premonitions.¹⁰³ Schelling suspects that ordinary sleep, with its dream imagery, might mirror a simultaneous mesmeric sleep (albeit one less pronounced than if it were to be deliberately induced).¹⁰⁴ A weakening of the filtering function of what he calls “the external life-component” might increase the latent human capacity for ESP abilities that reflect the “free, inner contact” of subtler vital forces that connect people and all other beings.¹⁰⁵

Schelling's most shocking statements on the efficacy of alchemy immediately follow and proceed from these considerations on mesmerism and the spectral in sleep and dreams. He suggests that just as a mesmerist or 'hypnotist' (in the old spiritualist sense) is capable of remotely controlling a person's mind, and thereby the person's body, for example to immediately effect cures for various diseases or even to force them to do things against their will, it should be possible to carry out scientific experiments that effect similar violent transformations in the inner-life forces of *things* rather than persons:

If we may now apply this back to an earlier, discussion, we can imagine it to be at least possible that men are entitled to a similar violence against other earthly things as they seem in part to be allowed against other men. They would then be in a position, through an entirely similar effect, to set free the interior of other corporeal things up to a particular grade, and thereby initiate true transformations through which a set of phenomena could emerge, phenomena that would be entirely different from those of normal experiments, which, however deeply they may penetrate, still only play on the surface.¹⁰⁶

It is, very significantly, at this point that Schelling begins his exposition on what a Platonic *idea* really is – as compared to how it has been misunderstood by the scholastic or 'academic' tradition.¹⁰⁷ In fact, Schelling suggests that Plato himself was only an inheritor of the *ideas*, an understanding of which was already ancient in his time and may have been subject to forgetful distortion. This is probably a reference to Plato's membership to the esoteric Pythagorean community, whose connection to ancient Egypt was briefly discussed above. The point of departure for Schelling's exposition on the true nature of *ideas* is the simple but profoundly significant observation that the Greek word *eidos* – which we translate as "idea" – means not only "form", as it is widely understood in the academy, but also both "appearance" and "vision." It would be equivalent to the German *shein*, which is related to their word for the beautiful: *shöne*. In German, the phrase *es sheint mir* is often translated as "it *seems* to me" – which is odd, given that Platonic forms have traditionally been understood as the opposite of "mere (sensuous) appearance." The oddity might be remedied by translating *es sheint mir* as "it *strikes* me", since both the German *shein* and the Greek *eidos* mean "appearance" in the sense of what is radiantly striking – what shines or radiates out from something as elemental or

essential to it. Here is also the connection to *eidos* as “vision”, since a “eureka moment” – when something *strikes* one like a flash of lightning – is a “moment of *vision*.”

In line with these etymological insights, Schelling explains that the *ideas* are neither abstract concepts nor fixed prototypes. When we see a pattern repeated on various levels, we are tempted to isolate the constant form in these iterations abstractly by stripping it of all phenomenal qualities. Yet the Greek *eidos* was a synonym of *phaenomenon*. The *eidos* is that inner spirit of something that may be embodied in many different ways, but the elemental *phenomenal qualities* of which can still be discerned despite the variances in the diverse mediums that serve as instances of its embodiment. Moreover, the *eidos* is not a fixed model or prototype; if it were, its instances would have the quality of mechanical reproduction rather than that of organic growth. Natural beings that embody the *eidos* also shape it. Schelling clearly views *ideas* as a product of developmental living processes in nature, and he sees these archetypes behind the *end-directedness* of natural beings that has been hitherto understood teleologically.

Natural *types* emerge when life forms in a generative condition tap into the non-physical memory of a past similar form, which form is in turn maintained by being embodied in ever-novel varieties of its basic type. Speaking of generative conditions, it is fascinating that Schelling connects the non-physical subsistence of these archetypes, in a dimension beyond ordinary space-time, with potential out-of-body experiences during intense sexual activity.¹⁰⁸ The implication is that just as a person’s specter may be released from her body at death or, more temporarily, during sex, archetypes also might appear of themselves – as *images* – without being sheathed in any particular physical medium. Of course, these images appearing to ‘the inner eye’, could not be *re-presented* but in a given physical medium with its attendant accidental features. For Schelling, Alchemy is the art or spiritual science of effecting metamorphoses – changes in *morphe* (form) – in beings, by apprehending and manipulating their spectral archetypes or *ideas*. To come full circle back to where we started, it is alchemical practice of this kind that Schelling sees as the epitome of the synergy of conscious and unconscious activity in artistic genius, which is widely associated with Schelling’s aesthetics without being properly understood for fear of being drawn down the rabbit hole of the paranormal.

Chapter 4. Life Worlds At War Over Earth

Despite his professed concern not to do so, Schelling ran ahead of himself. The limited state of scientific research into the paranormal in his time is partly to account for the overly literary quality of his speculations on the coming Craft. His thought also remains tainted by the basic structures of the Cartesian dualism and Kantian idealism from which he is struggling to break free. In my view, he does break free, but the way that he speaks of personal agency or the spirit world is distorted by the stark dichotomy between subjective will and the laws of nature as laws of consciousness. What Schelling, for the first time, struggles against leaves its mark deeply imprinted on his ideas.

Martin Heidegger lectured on Schelling's work and, although he seems not to have acknowledged it, many of the most bizarre features of his ontology appear to have been lifted right out of the occult aether wherein Schelling developed them: Nothingness as the abyssal un-ground of Being; Concealment and Unconcealment; the decisive Event that strikes like lightning or flashes forth like a eureka "moment of vision"; the historical destiny of the artist-scholars of a coming apocalyptic generation to build a new world whose architectonic is established by singing together their own epic poem; the Cartesian-Newtonian grid of uniform space and chronological time viewed as abstractly derived from a primordial worldhood structured in terms of the heterogeneity of space as it is encountered in *places* and of an epochal time experienced as world *ages*; sight and hearing as more primary than the organs associated with them; a dimension of meaning and discourse that is not only distinct from spoken language but is the primordial ground for its possibility; etc. I could go on, but I do not want to tire the reader. The reason the rational mind finds many of these 'Heideggerian' ideas so bizarrely incomprehensible is that – perhaps out of embarrassment – Heidegger uprooted them from those all-pervasive paranormal elements of Schelling's vision in the context of which they actually make a lot more sense. The thought of Henri Bergson also bears striking affinities to that of Schelling. This is especially the case with his conception of the progressive and

constraining forces at work in creative evolution, as well as the aesthetic character of the most general ideas that can be intuited – out of which abstract concepts are secondarily derived. I will suggest that with respect to the fundamental concepts integral to scientific practice the most general of these aesthetic ideas are those of Prometheus and Atlas. The naturalism of Bergson's thought should help to render more tangible the insights of Kant and Schelling with respect to the spectrality of aesthetic ideas or imagistic archetypes. Bergson's biological account of the rise of the intellect at the expense of instinct also augments the most serious deficiency in Heidegger's thinking, namely that his concerns over falling prey to 'biologism' do not justify the fact that he has virtually no account whatsoever of the evolution of Dasein as the tool using animal par excellence.

Heidegger and Bergson both show how Cartesian metaphysicians grasp the world in terms of a framework of calculative projection that effaces the natural characteristics of beings by locking them into a three-dimensional spatial grid. This flattens their heterogeneous experiences of place and covers over their lived duration with the freeze-frames of a chronological time indefinitely divisible into instants and admitting of an anticipation of their future states. This fourth temporal dimension is in fact constructed entirely in terms of the abstraction that is three-dimensional space. The succession of instants in time is a conception that treats the duration of life processes in organisms as if they were discrete and spatially juxtaposed parts of a mechanical construction that one may disassemble at will. The problem is that experiential states endure and interpenetrate each other. The calculative framework that the Cartesian paradigm has conditioned us to cast over our experience of being in the world is like a net wrought to only capture things caught by its geometrical mesh. The abyssal ocean that is the context for everything captured flows right through the net. If only we were to remember that the axiomatic projection of beings serves a purely practical function, then there would be nothing lamentable about this. There is no isomorphic relationship between our consciousness and Nature, and it is not as if the Earth would not exist but for human beings. That which eludes our lawful models of Nature is the experience of other forms of life, beings that endure differently from us.

As Bergson explains, instinct and intellect develop along divergent evolutionary tracks. Beings such as ourselves, who are morphologically incomplete and need to invent

tools to modify their environment and themselves just in order to survive, are constantly confronted with new problems and new needs created by their crafting of equipment. While this unstable dynamic lies at the origin of the innovative intellect, it is also responsible for the atrophy of instinct. Heidegger sees the late Renaissance and early modern period, the era of Galileo, as a particularly significant turning point in human technical development. It is in this period that increasingly finely ground lenses and other equipment presented us with macroscopic and microscopic views of Nature very different from that of our ordinary experience. This new perspective suggested that apparently simple beings were either decomposable into aggregates of what were taken to be more elementary constituents, and a widened cosmic perspective rendered formerly central beings such as ourselves and even our planet as only peripheral parts of a vast system – cogs in a mechanical wheel-work, as it were. At the same time, increasingly complex tools began to break down with greater frequency and the need for standardized manufacture of replacement parts for such devices analogically reinforced the mechanistic view of things in general.

Bergson sees a potential response to the hypertrophy of the technical intellect in terms of a resurgence of instinct, but an instinct that intellect has transformed into an intuition that is cultivated, above all, by artists. For Bergson, who helped to found Parapsychology as President of the Society for Psychical Research (SPR), psychical abilities occurring in the context of modern human culture are exercises of the power of intuition. His speculation that intuition is a resurgence of animal instinct as mediated by the intellect's manipulative grasp on the world, may account for why the psychokinetic manifestations of table tippers, metal benders, and so forth that Bergson himself studied at the SPR were so much more dramatic than anything one finds among non-human animals. What follows from this is that the further cultivation of intuition would not only restore those 'paranormal' capacities that have atrophied in us as compared to lower forms of life, rather it ought to transform us into the gods that we have dreamed of in our myths. Once we realize that the predictive formulae used to grasp beings and mold them into simplified models of the world at various scales are only instrumental devices geared towards our own empowerment, there is a reversal in the relationship of techno-scientific

discovery to the kinds of phenomena that it pushes out to its “fringe.” The spectral character of the anticipatory projection and enframing of Nature is revealed.

Heidegger and Bergson both lay great emphasis on the fact that there is a very understandable natural origin and need for these geometrical tendencies that are developed in their most abstract form in Cartesian thought. To break things up and remold them according to our own vital interests is a precondition for our survival. Our practical activity is our primary mode of inhabiting the world. Without crafting and using tools we could not carve out places in Nature suitable for our habitation. It becomes problematic insofar as the instrumental orientation towards beings that is cultivated throughout the course of technical development ultimately alienates us from our primordial experience and atrophies certain of our natural capacities. I suggest that phenomena we refer to as ‘paranormal’ are actually pervasive in Nature at large – it is only that these ‘irrational’ aspects of living processes are filtered out by the reductive models of them fashioned by scientists working under the Cartesian paradigm. So-called ‘paranormal’ phenomena are not supernatural in the sense of being supra-natural, as Kant would have had them be, but are super-natural in reminding us of the Supernature that is simplified and uprooted in the lawful models of ‘Nature’ constructed by Neo-Cartesian scientists.

That our primary experience of spatiality is also heterogeneous in a way that is psychically shaped by things of vital significance to them is evinced by our directional orientation towards these places and our ability to draw them near to ourselves while they remain afar in ‘objective’ terms – that is, once we have objectified the places as ‘spaces’ and ourselves as ‘entities.’ When we are surprised that a lost domesticated animal can find its way home over thousands of miles without having ever traveled the route that it takes back, or when a vivid clairvoyant perception of a spatially remote location startles us, it is because we have allowed our conceptual constructs of space and time to supplant our primordial experience of being situated in our world with respect to places of significance to us. As Bergson recognizes, and as Sheldrake’s research confirms, members of primitive tribes only recently integrated into the civilized world retain such orientation abilities that defy the rationalistic modern conception of space and time.

As Heidegger cryptically suggests in *Being and Time* and elaborates more fully in the Zollikon seminars, we can know that a painting hanging on a wall behind our backs is hanging askew even if we have not yet turned around to gaze upon it just as we ‘see’ a train station that we are driving towards in our mind’s eye from observational vantage points that we have never physically had on it. In fact, while sitting in one room of our homes dwelling on someone at some spatially remote place, we can bring her environs closer to us than another room in our own house. These are no ‘mere acts of the imagination.’ They are examples of a primarily clairvoyant experience of our *world* that precedes any predication and evaluation of ‘truth’ claims. Falsifiable propositions can only be framed once what is revealed to us is objectified, namely by someone whose experience of his existence has become that of a subject relating to objects so reified that they have been uprooted from the world that is the context of their significance.

I draw on the late work of Maurice Merleau-Ponty, which was deeply influenced by both Heidegger and Bergson, to elaborate on the way in which subjectivity and objectivity are reciprocally constructed from out of what he called the “life world” of our primordial experience. Merleau-Ponty recognizes that “bastard and unthinkable experiences” such as telepathy and clairvoyance are clues to the way in which what can be grasped by conceptual thought is not commensurable with the whole of nature as it is given to be experienced by our form of life. With repeated references to the states of mind that artists find themselves in during their creative process, Merleau-Ponty unfolds the idea of a Visibility that “emigrates” from our body in a more limited sense to our surrounding environment so that the world becomes a spectral “flesh.” Psychokinesis can be understood as a reflection of this living bond with nature and, together with other “bastard and unthinkable experiences” it makes more sense if we acknowledge that our life world is an ideality. As Schelling understood, ideas are not concepts graspable only by the objective thought of a Cartesian subject lacking in dimensionality, they are the imaginary union of concept and instance that precedes the subjective and objective.

Being outside of our selves is a condition of possibility for both our lived experience of the world and of (what is after the fact framed as) our ‘inter-subjective’ relations with the other who somehow inhabits a world with us but from a perspective other than our own. In its attempt to grasp the world axiomatically or formulaically, in

terms of anticipatory mathematical calculability, Science strips away so much of our lived experience of others and our being in the world with them as “phantasms” to the point where we face “false problems” such as that of solipsism. Telepathy, clairvoyance, and out of body experiences attest to what every child who struggles to establish his perspectival autonomy already knows about being in the world with others. Merleau-Ponty remains hopeful. He sees how Physics has had to establish a new relationship with Psychology in view of the spooky phenomena of the quantum realm, and he holds out the possibility for a new Biology that would help us to understand the world *qua* “flesh”.

The great danger to which we have fallen prey was to mistake for Nature in itself those images of Nature projected by tools that we, as one particular type of beings, felt the need to craft. This development of the instrumental comportment towards Nature is especially dangerous when it treats even human life and its ecological context mechanistically. Yet, as Heidegger put it “where the danger grows, so too does the saving power.” The unique crafts capacity of beings such as ourselves is not solely aimed at technical development. Craft is also the origin of fine art. The classical Greeks, for whom the inventor and the artist were two types of artisan, used the word *techne* to refer to both technology and artwork. Quite to the contrary of the tacit presupposition of most people conditioned by the Cartesian paradigm, theoretical science is not only driven by technological development but is a wholly derivative expression of it. All science is always already techno-science.

Moreover, the kind of technical activity that is foundational for scientific research is, at its most elemental level, one and the same as the craftiness at work in ‘arts and crafts’ that is in turn foundational for the more elaborate exercise of aesthetic judgment in fine art. Unlike tools and the objectified beings that they are designed to manipulate, a work of artistic genius is an end in itself in a way that reflects the purity of the creative impulse. Consequently, in the face of the world-transformative power of technical progress, which seems to know no bounds in its instrumentalist transformation of every end into a mere means, cultivating aesthetic intuition affords us a way to reflect on the questionable essence of techno-scientific development and the useful, but necessarily distorted, pictures of Nature that it offers us. Heidegger speaks of this as an unrealized potential of art that lies beyond the succession of styles that already takes place in a

dialogue with technical developments, such as the impact of the invention of photography on painting or of plastics on sculpture.

In “The Origin of the Work of Art” (1935) it becomes clear that what Heidegger somewhat awkwardly calls the “world-hood” of this world in *Being and Time* is nothing that can ever be objectified in this manner nor does it emerge from an aggregate of objects. Heidegger’s thinking on Science and Technology cannot be understood unless it is read through the lens of this essay in aesthetics. A few glances at a lecture course on *Logic as the Question Concerning the Essence of Language* delivered in 1934, only one year before Heidegger first penned “The Origin of the Work of Art”, in turn affords us a key to some of the complex ideas in that essay by presenting them in relatively more straightforward language suited to his audience in what was nominally offered as an introductory course on Logic. These two texts illuminate what is perhaps both the most obscure and the most important part of *Being and Time*, Division Two Part V on “Temporality and Historicity”, where Heidegger most fully develops his thesis that Time is the horizon of Being or, in other words, that *our existence is radically world-historical*. Here Heidegger volunteers having been influenced by Friedrich Nietzsche and, as we shall see, that admission should be extended to “The Origin of the Work of Art” and the 1934 lecture on Logic as well, where Heidegger nearly paraphrases Nietzsche at times without any explicit acknowledgement. Here is the passage from *Being and Time*:

The possibility that historiology in general can either be ‘used’ ‘for one’s life’ or ‘abused’ in it, is grounded on the fact that one’s life is historical in the roots of its Being, and that therefore, as factually existing, one has in each case made one’s decision for authentic or inauthentic historicity. Nietzsche recognized what was essential as to the ‘use and abuse of historiology for life’ in the second of his studies “out of season” (1874), and said it unequivocally and penetratingly. He distinguished three kinds of historiology – the monumental, the antiquarian, and the critical – without explicitly pointing out the necessity of this triad or the ground of its unity. *The threefold character of historiology is adumbrated in the historicity of Dasein*. At the same time, this historicity enables us to understand to what extent these three possibilities must be united factually and concretely in any historiology which is authentic. Nietzsche’s division is not accidental. The beginning of his ‘study’ allows us to suppose that he understood more than he has made known to us.¹

Heidegger appropriates three related ideas from Nietzsche. The first idea is that any being in the world needs to be bounded by a horizon. Although this horizon may shift and change shape, the way in which it will always conceal aspects of nature or the earth allow a being to pursue its vital concerns. The second idea is that not only is a scientific History impossible, but the attempt to deal with our historical being scientifically reveals the essential limitation of the ‘truths’ apprehended by the sciences. Everything ‘true’ is wrested from out of the necessary concealment of the aforementioned horizon of being in the world, which is the bounded whole of a people’s historical existence. The third idea is that History, properly understood, is neither objective nor factual in the sense that the subject-matter of the physical sciences is *supposed* to be, but is the living mythology or folklore wherein a people’s envisioned “past” heritage reflects their projected *future*. The priority of the monumental mode of History over the antiquarian and critical ones in Nietzsche becomes, in Heidegger, the priority of the futural mode of our being *as* Time. This is to say that the world that we *live* in does not have any objective reality or persist in the manner of an entity. Whether we lose our world or, after seeming to have lost it, we are able to conjure its resurrection and continued creative development, is decided as a matter of historical struggle. Nothing is “true”, for anyone, outside of this struggle.

It is not in a merely figurative sense that we speak of dead civilizations as “lost worlds”, nor was it only a figure of speech when the great thinkers of Europe referred to America as “the new world.” They were not exuberantly mistaking an unexplored continent for another planet. As Heidegger rightly understands, the Earth is distinct from the worlds that take shape on her, that reshape her, that may be buried in her once again, and that may – some day soon – even break free from her womb to spawn the world of another planet. Great poets and thinkers craft the worlds of historical peoples by defining their folkloric consciousness. The folklore of a people establishes the architectonic for architecture and every other form of art that turns the Earth into a dwelling place for them. The world of a people might experience rebirth after centuries of decline, as our civilization did at the end of the European dark ages. Worlds struggle with one another over the Earth, so that the defeat and loss of one’s world is essentially no different for the people who have suffered it than an extraterrestrial invasion would be for terrestrial humanity as a whole. A fusion of world-historical horizons is also possible, but such a

fusion is not transcendental; it demands a force that can melt and meld traditions. As I go on to discuss in the next chapter, this world-colonizing force is the essence of technology.

4.1 Dasein as Homo Faber

Both Heidegger and Bergson understand the essence of Technology as something revealed in how our interpretation of Being is revised throughout the course of successive historical epochs that unfold a singular destiny. According to Heidegger, every historical epoch is grounded by a metaphysical interpretation of what *is*, and the essence of modern technology demands more profound reflection than the metaphysical essence of any prior age.² Bergson claims that looking back thousands of years from now, our wars and revolutions will be insignificant compared to the great technological innovations that epitomize our epoch; the age of the steam-engine will be grasped in thought then the way that the bronze age or stone age are remembered now.³ The two thinkers choose essentially the same type of modern technology as an epitomizing metaphor for what characterizes the peril and promise of such revolutionary technological development in general: the motion picture projector. Each also claims *both* that this way of grasping the world is new *and* that although it only comes into its own with modernity, it has its inception in classical Greek thought and has been germinating ever since.

Most Greek thinkers saw ideal concepts or organic forms as what is most real. As Heidegger explains, the *hypokeimenon* was for them still an aspect of beings – as the *subiectum* remained for medieval thinkers. The subject of a thing was “that-which-lies-before, which, as ground, gathers everything onto itself.”⁴ In other words, the subject of a thing was that in which its formal properties cohered, it was “subject-matter”. The Greeks could not have framed the thought of the whole world’s reality as needful of verification. When man becomes *the* only subject and his representational thinking grounds the certitude of all other beings, this means that: “Man becomes the relational center of that which is as such.”⁵ Modern research science involves a transformation in the conception of truth as *veritas* or verification, namely as the accuracy or certainty of a subject’s re-presentation of a being whose presence has become “objective.” Nature is taken account of through a projection that anticipates its future course in a calculative manner, and History, including Natural History, is framed as a rigorous schematization of

the past as ‘fact.’ Both nature and its history are thereby objectified and “set in place” [*gestellt*].⁶ We should hear in this German term *gestellt*, the verb *stellen* – which means to set in place, to set upon, in the sense of challenging. In other words, truth as representation is not mere correspondence; it is, rather a taking to be true, a setting-upon and securing that does violence to what is objectified.

According to Heidegger, the metaphysical revolution that defines the beginning and end of world ages takes place, in our age, in the *Meditations on First Philosophy*.⁷ Descartes’ interpretation of truth still moves within the sphere of inquiry determined by the question first posed by Plato and Aristotle, namely “What is it to be?” (This is what Heidegger sometimes calls the questioning after beings or entities, as contrasted with the Question of Being.) However, Descartes’ answer to this question requires and makes possible a “theory of knowledge” for the first time. Heidegger claims that before this “the reality of the outer world” as such was never put in question.⁸ Heidegger thinks that all subsequent German representational thought [*Vorstellungs-philosophie*] consists of affirmative modifications of the Cartesian position, and that even Nietzsche failed to overcome modern metaphysics.⁹

The framing of the whole world’s reality as needful of verification, this framing of a world (and not just any given beings *within* the world) as an object present-at-hand [*das Vor-handene*] for the subject to represent [*vor-stellen*], is the move that Descartes makes that comes to be definitive of our age as that of the “world picture” [*Weltbild*]. What defines the modern age is the very fact that, for the first time, the world can become a picture. This is what is “new” about *der Neuzeit* – the modern age, or literally “the new age.”¹⁰ In his later essay, “The Thing,” Heidegger identifies the television – which in German is called *fernseher* or “far-seer”, as the epitome of this development.¹¹ Bergson also compares the machinations of our intellectual way of knowing things to a cinematographic device.¹² The Greek idealists saw things as completed figures, eternally abiding as such. Bergson compares the privileged moments in terms of which they thought to those captured by classical sculptures; they radiate as epitomes of whole movements in the way that single photographs do.¹³ “The cinematographical mechanism of the intellect” that comes to the fore in modern science breaks up those classical figures with its “snapshots” so that they become points extending themselves in space through a

succession of instantaneous positions.¹⁴ This proceeds from the Cartesian revolution in geometry, where the elaboration of a curve is no longer seen as describing a static or timeless figure but as a succession of points that, in terms of two or more axes, describes an interval of time.¹⁵

One can see the difference, for example, from the fact that for Aristotle it sufficed to demonstrate that the form of celestial orbits is circular, whereas Galileo was concerned not simply with replacing this circular orbit with an elliptical one, not merely with correcting the *form* of the circuit conceived of in its eternal completion, but with determining a law describing the motion of planets *conceived as points* along this circuit – a law that would allow for the mathematical projection of their future positions.¹⁶ Also, unlike classical thinkers with their heterogeneous space, Galileo did not privilege any moment in the trajectory of a falling body with a view to determining its velocity.¹⁷ As Bergson sees it, this is what most distinguishes modern science from ancient science. Heidegger could not be more in agreement. Modern science is “mathematical” not in the sense that it employs numerical calculation, but in the sense that it involves that which is known in advance. *Ta mathemata*, the Greek root of “mathematics”, means “that which man knows in advance”, in other words that which filters every observation of the new and contingent and organizes it with respect to what is known before it. Number is only mathematical because it is the clearest example of the always-already-known.¹⁸ This is what is involved in developing a hypothesis testable by experiment. Like Bergson, Heidegger also notes that while Aristotelian so-called ‘science’ did employ *empeiria* or careful observation and measurement, it totally lacked the modern conception of an experiment wherein the behavior of an object sphere of beings is re-presented or anticipated by an exact ground plan and tested against this under constrained conditions.¹⁹

Bergson realizes that modern science seeks to establish time as an independent variable in terms of which all abstractly reconstructed magnitudes are to be measured.²⁰ Although the time that becomes all-important for modern scientists is not our authentic experience of duration, the fact that it breaks up what were supposed to have been eternal forms into even more abstract and homogenous units *for the sake of greater utility*, also cultivates a need for a complementary intuition of duration with respect to non-utilitarian

concerns.²¹ In other words, by forcing the cinematographic manner of thought to its limits, modern science, especially Physics, makes us aware of the limits of its appropriate scope. Whereas classical Greek thought was a metaphysical justification of common sense ideas imbedded in our language, reflection on modern science allows a return to the primordial. Not a return to the past, but a movement into the future from out of the primordial – a development wherein the vital force of evolution becomes consciously self-directing.

In Heidegger's view our 'scientific' interpretation of being in general on the basis of entities occludes the "worldhood" of the world.²² He maintains that there is a more primordial pre-scientific concerned dealing with things in the world that we do not need to put ourselves into, the way that we need to be conditioned into the scientific mindset. Heidegger attempts to excavate this originary existential comportment.²³ Bergson is likewise concerned with recollecting a disposition towards beings in the world that has been covered over by the modern scientific interpretation of the self and world. Common to the way in which both Heidegger and Bergson attempt to recover our way of being in the world prior to being conditioned by the Cartesian world picture is a recognition that our primary experience of things is not theoretical, but practical.

On Heidegger's account in *Being and Time* our basic orientation in the world is practical and our *praxis* is mediated by Things, which the Greeks called *pragmata*.²⁴ These are not "mere Things", but equipment that is inconspicuously withdrawing within its handiness for-the-sake-of doing certain work. Equipment always signifies a referential totality. Our being at work in the world with our tools is not in the first place mediated by any overlay of theoretical knowledge of their function, as if praxis were blind without it.²⁵ Tool use has its own pre-scientific knowledge or know-how. According to Heidegger, the shift from the predominance of a practical being in the world to the theoretical knowing of the world occurs on the basis of a disruption in the context of significance that assigns the "towards-this" and "with-which" of tools and other equipment.

The heretofore *tacit* referential context can be *explicitly* illuminated in three ways: 1) breakdown of equipment; 2) missing equipment; and, 3) equipment getting in the way.²⁶ In all of these examples of a disturbance in the assignment of tools, a break in the

referential context of our praxis transforms our experience of the world. We are *reduced* to a pure observer of mere things, which are uselessly laid before us stripped down to their bare presence. Tools go from being equipment ready-to-hand for use in some project to being objects that are merely present-at-hand. Our circumspective concern that "lets things be" is frustrated. We may have to rework tools or 'improve' things to once again render them serviceable, and if this is not possible, we may even be tempted to smash them into pieces.²⁷ We wonder what we are doing in this place, this tool shed, which becomes just a space for setting upon a problem solution. Thus begins the modern scientific mode of Being. Tinkering with equipment that is *not* experienced as withdrawn into its usefulness precedes the *theoretical* development of modern mathematical science in the 17th century.²⁸ According to Heidegger, "Machine technology is itself an autonomous transformation of praxis, a type of transformation wherein praxis first demands the employment of mathematical physical science."²⁹ Chronologically, modern theoretical science seems to appear first, but *ontologically*, its manifestation is grounded in the relationship to things that defines the essence of technology.

Bergson reaches much further back in his archeology of how our practical comportment towards things evolves into the modern scientific understanding of the world in terms of Cartesian space and time. This abstract decomposition of our original experience of being in the world first arises as a hypertrophied development of a practically oriented drive to break things up in such a way as to get a better grasp on them for the purposes of survival and growth.³⁰ "Consciousness" has a practical function.³¹ If consciousness – the Cartesian *cogitare* – were primarily for the sake of knowing, as rationalistic idealists take it to be, it would not make sense for certain things to remain in the shadows outside of its view.³² If, however, our consciousness is actually a filter, which primarily conceals rather than reveals, for the sake of the practical action of an organism, then it makes sense that it would not be commensurate with the natural world – but only a limited perspective on it; an image of what is in our interest rather than of the whole (of which there can be no image).³³ In *Creative Evolution*, Bergson expands on this idea in a way that brings him closer to Heidegger.³⁴ There he treats intellect as a faculty of fabrication. Unlike a pure dialectical speculation that would carve up the world at its joints, its tendency is to disregard the natural forms of all things and treat matter –

in general – as a medium that is infinitely malleable and capable of being reshaped to fit any frame. In other words, natural form is viewed as artificial.

Like the Cartesian wax, any being is taken to be dissolvable into homogenous elementary solids that function something like building blocks each sufficiently lacking in character so as to be suitable for any manner of lawful or systematic construction. The general framework for this construction is a homogenous space, an artifice that is inconceivably outside the experience of extensity open to non-human animals. The great problems and paradoxes of Philosophy arise when this primarily practical faculty is misdirected towards speculation on the nature of things, and mistakes its functional objectification of things as discontinuous and immobile for those things as they really are rather than those things schematized according to our possible action, according to our designs on them. We ought to reclassify ourselves *Homo Faber* instead of *Homo Sapiens*, since intelligence, as we are able to employ it, begins with tool use and is a faculty for the manufacture of artifice and the indefinite variation of this means of production.³⁵ Mechanistic science is an outgrowth of our natural geometrical tendencies. Directed in the first place towards carving out a human habitation in a dangerous natural world, these tendencies predominate over the fine artistic appreciation and channeling of the spontaneity of nature in the form of genius.³⁶

Bergson explains that abstract logic and scientific geometry engender each other on the basis of the natural geometry that we employ when we break material up into solids that are easy to manipulate.³⁷ All of the operations of our intellect are essentially geometrical.³⁸ Neither deduction nor induction can function without a geometrical intuition of homogeneous space.³⁹ Mathematical order is one and the same with inflexible determinism, but the so-called “laws of the physical world” that express determined order by measuring everything as a variable are intellectual projections that have no objective reality.⁴⁰ The extraordinary success of a scientific method based on mathematics is really a case of a self-fulfilling prophecy: we read out of the world what we have written into it. Mathematical order is a negative *interruption* that acts as a sieve to filter the movements of Nature.⁴¹ It is like a planar cross-section cutting “instants” out of the flux.⁴²

This is basically no different from Heidegger’s understanding of how the framework of modern technology challenges Nature to present itself in a certain way. In

German "the real" is *das Wirkliche*, which is related to that which works [*wirkt*].⁴³ Modern science, as the "theory of the real", sets upon (*stellen*) the real, ordering "the real" to arrange and exhibit itself as "an interacting network."⁴⁴ The German word translated by "network" here is *Gewirk*, meaning "web, texture, weaving." Heidegger introduces a hyphen into it, so that it becomes *Ge-wirk*, an active gathering of that which works and is worked. The 'Truth' becomes *what works*. The network has an internal normative coherence that is self-reinforcing. There is a feedback loop between the results prompted by the experimental setup, and the design of machinery for future experiments.⁴⁵ This ongoing research activity of modern science is institutional – it requires institutions to sustain it and the results it produces are in turn determined by the institutionalized interests.⁴⁶ Heidegger's insight is that it is not just the research methodology that has to adapt itself to its results, but beings also are adapted by the ongoing activity of research as it builds the ground plan into nature (and history). The consolidation of institutional research science leads, in his view, to nothing less than "the precedence of methodology over whatever is."⁴⁷

In our capacity as artisans, as a species that requires technical development for its very survival, we are also innately geometricians – who, in principle, reject the unforeseeable.⁴⁸ Bergson thinks that if we de-condition our minds of rationalistic analysis, we can place ourselves back at "the *turn* of experience" that is, as it were, the 'fork in the road' leading to the development of intellect at the expense of the instinct that drives most other forms of life.⁴⁹ It is not the case that the former is an advance over the latter and develops on the basis of it.⁵⁰ Intelligence and instinct are divergent solutions to the same problems.⁵¹ In all actual cases, these two tendencies remain ultimately indivisible, but the distinction between them may be conceptually reified so as to better understand their relationship with one another.⁵² If we consider instinct and intelligence each in their most epitomizing cases, we find that instinct is a faculty of using and of constructing organically organized instruments, whereas intelligence is a faculty of crafting instruments from unorganized (inorganic) material and making use of these tools.⁵³ It follows from this that instinct is necessarily specialized, by contrast with intelligence employed in the construction of tools – which are imperfect instruments admitting of an unlimited reconfiguration of form to improve their functionality with a

view to various projects.⁵⁴ This intelligence bestows the living being with a proliferation of new powers.

While instinct automatically closes off an animal's sphere of action, technologically-oriented intelligence tends to create a new need for every one that it satisfies and thereby opens up the field of free action for beings characterized by crafts production.⁵⁵ Consequently: "An intelligent being bears within himself the means to transcend his own nature."⁵⁶ If the immanent life force were unlimited it would have commensurately developed instinct and intelligence in the same organisms, rather than always furthering one at the expense of the other.⁵⁷ As it happens, we would have to go very far back into evolutionary history to find primordial organisms where the two tendencies are almost indistinguishably integrated.⁵⁸ It is possible, however, that along the way to more fully developing one type of psychical activity over the other, nature hesitated at certain points – allowing for a resurgence of the other.⁵⁹ Instinctual knowledge, such as is supremely developed in bees, remains latent in human beings and can be retrieved by diving deep into the generative force of life within the primary instincts that we each still have, at the outset of the acts in which they express themselves, prior to their being interpreted by intellect.⁶⁰ Instinct is a sympathy that if it becomes capable of extending its object and of reflecting upon itself, in other words if it becomes disinterested, transforms into an *intuition* that exceeds the analytical capabilities of the intellect.⁶¹ Our extrasensory perception is an intuitive reassertion of instinct.

4.2 Technoscientific Projection vs. Primordial Perception of the Life World

Indeed, various non-human organisms appear to have a directional orientation in places that allows them to draw near things that appear to be distant from them in terms of abstract space and they also seem capable of communicating without the use of any known sensory mechanisms. Bergson addresses such animal capacities in *Time and Free Will*, as part of an argument that Kant's postulation of a space that is separable from, and given before, the objects that fill it, has not been seriously challenged up to his own era.⁶² Even the so-called 'empiricists' adopt this conception of space and really have to wind up accepting this Kantian postulate because unextended sensations (which are already abstractions) cannot be synthesized without an act of the mind.⁶³ The extensity

experienced by non-human animals does not have this abstract, homogeneous quality. Bergson speculates that animals probably do not picture to themselves an external world entirely distinct from themselves and from the sensations for which they serve as a container.⁶⁴ Such a theater of the mind, in which states in processes are made into objects, is the basis of theorization. As I will remind the reader later on, the Greek word *thea* is the root for both “theater” and “theory”. Bergson notes the observation of naturalists that animals are able to find their way home over a distance of hundreds of miles by a path that they have never taken before, sometimes (as with birds) in a straight line.⁶⁵ The various directions open to animals likely each have their own peculiar quality *as directions*, in a way analogous to our natural ability to distinguish our right arm from our left arm. Directions also may have qualitative differences from one another that cannot be attributed to a difference in ‘spatial contents’ and that even conflict with the spatial assessment of equidistance between two or more abstract points.⁶⁶

Experiments carried out in the early 20th century by the zoologist F.H. Herrick and the naturalist Bastian Schmidt are probably the type of observations of naturalists regarding animal directionality that Bergson is referring to.⁶⁷ Herrick’s cat accidentally escaped when he was trying to carry it in a bag while traveling by streetcar from his home to his university some 5 miles away. The fact that the cat was waiting for him at home that very night after having navigated the maze of streets in the city of Cleveland, Ohio, prompted Herrick to carry out a series of deliberate experiments where he would carry the cat in a closed container to various locations one to three miles away from his home. Once released, the cat could find its way home without difficulty from any point on the compass. Schmidt took dogs to various locations that they had never been before in enclosed vans and by means of circuitous routes. He had trained observers posted along the dogs probable root home, and should the dogs take some other route he also had them followed at a distance by cyclists who were instructed not to interact with them in any way other than to observe their behavior. When the dogs were released, each spent up to a half hour running back and forth in a relatively circumscribed area, apparently in order to get its bearings. Eventually the dog would repeatedly stare intently in the direction of its home, before finally setting off in this direction at quite a rapid pace and without further hesitation. The dogs would successfully make their route home by

whatever path that would allow them to avoid road traffic, farmhouses, strange villages, and other places where they might run into trouble.

Herrick and Schmidt's experiments are among those reviewed in Rupert Sheldrake's study of the unexplained powers of animals, which includes several chapters on the directional orientation of animals. Sheldrake is a world renowned, albeit controversial, British biologist. He received his PhD in biochemistry at Cambridge University after having studied philosophy at Harvard University. He was a Fellow of Clare College, Cambridge, and a Research Fellow of the Royal Society. He is the author of more than sixty scientific papers and numerous books.

As Sheldrake reports, a collie dog named Bobby made his way back home to Oregon after being lost more than 2,000 miles away in Indiana.⁶⁸ In most cases of this kind, the animals have been taken to the location at which they were 'lost' or released in an enclosed vehicle – such as a car, or bus, train, or boat – and usually by indirect routes, and yet they returned home by a more or less straight heading rather than by tracing back the indistinctly perceived route by which they came to the remote location.⁶⁹ The most astounding cases of this type are those involving dogs finding their way back 'home' in the midst of war zones. During the Vietnam War the United States would airlift dog scouts into the jungle to support patrols, often as much as ten miles away from their home bases. In one case of this type, a dog named Troubles was abandoned by a patrol that came under enemy fire after his handler, William Richardson, was wounded and airlifted to a hospital. Troubles somehow made his way on the ground through the war zone of an unfamiliar Vietnamese jungle that he had been flown into by helicopter, all the way back to the First Air Cavalry Division Headquarters where, though emaciated and exhausted, he would not let anyone touch him until he curled up next to Richardson's belongings.⁷⁰

Sheldrake carried out his own experiment with a dog left to find her way home in Leicester, England.⁷¹ This dog, named Pepsi, was transported on the floor of a taxi (where she could not see out the windows) to a street corner unfamiliar to her, some 2 miles east of her owner Clive's house. Sheldrake and Clive grew worried when she did not turn up for several hours. Clive then thought of checking the home of his sister, who was away on vacation. Pepsi had been taken to this house by car six months prior to the experiment, but she had never made her own way there or back to Clive's home.

Nevertheless, there she was, lying comfortably on Clive's sister's lawn, only a mile east of where she was abandoned (rather than the two miles distance to Clive's home). The GPS device attached to the dog had recorded how, like the dogs in Schmidt's earlier experiments, Pepsi had begun not by following Sheldrake and Clive's taxi as it pulled away, but by pacing back and forth in the streets immediately surrounding the corner where they left her, as if to psychically get her bearings before deciding intently on a certain direction. On another occasion this dog escaped from Clive's sister's house and made her way four miles to the southwest to visit a friend's house.

The evolutionary benefit of such a directional sense can be seen when we consider how animals navigate their vast home ranges and stray into unfamiliar pathways within them.⁷² A "home range" is an area far more vast than the territory defended by the animal as its own. While the home range is geographically bounded in every direction by certain extremities, it contains many potential paths through terrain that is completely unfamiliar to the animals in question. This range often consists of the hunting ground that lies beyond the territories of pack animals. Wolves have the most enormous home ranges, covering some 5,000 square miles on Ellesmere Island northwest of Greenland. When predators are chasing their prey or prey is frantically fleeing a predator, the respective animals are not likely to remember all of the details of the path that takes them into unknown places. Having an experience of directionality that allows an animal to find its way back home from these unfamiliar places, and to thereby expand its home range or its scope of activity within a home range, is of clear evolutionary advantage. Migration is deeply related to homing in that cycles of migration can be conceived of as a "double homing system."⁷³ Establishment scientific literature refers to the migratory navigational capacity of birds as "an inherited spatiotemporal vector-navigation program" – a piece of jargon that, as Sheldrake notes, merely restates the problem that such an ability poses for physicalist presuppositions rather than solving it in any way compatible with them.⁷⁴

Of course, it is very difficult to test predatory animals in the wild to determine how much of the ranging ability can be explained by use of the known physical senses. Controlled experiments can be much more easily carried out with homing pigeons. When released from remote locations hundreds of miles away from any place they have ever been before, these "racing pigeons" can find their way home in a single day. As the most

well informed researchers will admit, numerous studies have ruled out all physicalist theories of animal homing.⁷⁵ The theory that these birds remember the twists and turns of their outward bound journey, first proposed by Charles Darwin, has been invalidated by placing the pigeons in rotating cylinders, anaesthetizing them, and then in such a state, transporting them to the unfamiliar locations in dark vans. Nevertheless, the birds manage to fly straight home. They have been fitted with frosted-glass contact lenses to temporarily blind them so as to rule out the theory that the pigeons used recognizable landmarks or the precise position of the sun to navigate.

It is noteworthy that these blinded birds did tend to crash into trees or wires near their loft when they attempted a landing once they had found their way home. That the sun acts as an indispensable navigational beacon has also been ruled out by keeping pigeons in artificial light for various intervals of time sufficient to shift their internal clocks by six or twelve hours. Such birds are initially confused when they are released, but they quickly make a correction and fly home. Pigeons are also capable of homing on overcast days and even at night. The theory that the sense of smell is the basis of such homing abilities has been refuted by experiments wherein pigeons had their olfactory nerves severed, their olfactory mucosa anesthetized, and their nostrils blocked with wax. This did not appear to affect their ability to find their way home.

Finally, the hypothesis that the directional orientation of pigeons (and other animals) is grounded in a little understood magnetic sense has been disconfirmed by attaching magnets to some of these birds and comparable non-magnetic weights to others of them, only to observe that the two groups remain equally capable of homing. Note that even if there were a magnetic sense so carefully tuned to give information on latitude, it would not help the birds – who can fly home equally well from all points of the compass – orient themselves longitudinally.

This apparently extrasensory capacity for spatial orientation is perhaps most strikingly manifest in the extraordinarily complex patterns of social organization and architectural engineering exhibited by creatures with brains smaller than a pinhead. Social insects behave as if they were the limbs of a single "superorganism", engaging in vast building projects – such as 10-foot high nests with galleries, chambers, and ventilation shafts. Some insects, such as termites, are blind. Their physical sensory organs

of scent and sound are hardly enough to account for what was observed in the following experiment. One has a "termitarium" – an enclosure of termite mounds – and breaches are made in the termite mounds within it. Then an opaque, soundproof and scent-proof, steel barrier is inserted into the termitarium at just the place to divide the damaged areas of the mounds. Parts of any given breach will asymmetrically fall on each side of the barrier. The worker termites that rapidly endeavor to repair the breaches can know nothing of each other by means of their physical senses. Nevertheless, when their work is complete and the steel plate is taken away, the two repaired halves of the termite mound match each other perfectly.⁷⁶

Fish also exhibit similar apparently telepathic abilities to coordinate their rapid movements in schools. In one laboratory experiment, members of a school of fish were temporarily blinded by having their eyes fitted with opaque lenses. The researchers also cut key junctures of the nerves of the pressure sensitive organs that run along the length of their bodies, known as "lateral lines". This means that these fish were left with no known physical sensory organs by which to effectively communicate with each other. Nevertheless, they were still able to precisely coordinate their movements with those in the rest of the school. These include predator evasion movements where all of the members of the school dart away from each other simultaneously. In so doing, none of the fish collide with each other – this despite the fact that the explosive expansion around a predator occurs at a speed of ten to twenty body lengths per second. Even in the case of fish that have not artificially had their sight impaired and their lateral nerves cut, this is apparently too fast for nerve impulses to move from their eyes to their brains and then from their brains to their muscles.⁷⁷

As it is with schools of fish, so also it appears to be with flocks of birds. Films of large flocks of dunlin birds, when slowed down, show that the organic banking movements of the flock are initiated from either a single individual or a few birds together at some point within the flock. The wave of movement radiates outward from this point to the rest of the flock, taking only 15 milliseconds (thousandths of a second) to pass from one bird to its neighbor. Yet when dunlins are tested in a laboratory, it is found that they are incapable of even the most primitive reaction to sensory stimuli (such as a flash of light) at any rate faster than 38 milliseconds. Thus it seems it would be

impossible for any given dunlin, by known sensory means, to gage a vast pattern of movement and coordinate its own bodily motion accordingly *in less than half that time*.⁷⁸

In addition to exemplifying an irreducible capacity for directional orientation, such studies appear to demonstrate the ability of non-human animals to communicate 'telepathically' or by some means other than the known bodily senses. The similarity to Telepathy in humans is more apparent in cases of biocommunication between *individual* animals that are emotionally bonded. Two horses who habitually walk together, graze together, and otherwise interact, are separated from each other at a sufficient distance to make communication by sight, smell, and sound impossible. The regular feeding schedule of the two horses is replaced by random feeding times, and their regular exercise sessions are randomized as well. Nevertheless, when one of the two bonded and now separated horses is fed, the other simultaneously observed horse demands food. Similarly, when one of the two is taken out for exercise, the other grows excited in the stable. When one of the two horses is fussed over by the horse trainer, the other remotely located horse shows signs of disturbance suggestive of jealousy. Apparently non-physical communication was observed in 68% of 119 such experiments. Interestingly, a control run with horses that were hostile to each other found a positive result in only one out of fifteen experiments. A similar experiment with Boxer dogs was carried out at Rockland State Hospital in New York. A mother Boxer and her son were separated into two soundproof rooms in different parts of the hospital. The dogs had been trained to cower when a rolled up newspaper was raised and waved at them. The experimenters found that when the son was threatened with the newspaper, not only would he cower, but the isolated mother – also under observation – would do so as well, at exactly the same time.⁷⁹

Rather than concluding that some animals have a distinct faculty responsible for what seems to us to be an extraordinary sense of direction and a remote perception of things of vital significance to them, Bergson speculates that it may be the case that their heterogeneous experience of extensity is also primary for us prior to the conditioning of our intellect for technical purposes. This overlay of extensity by homogenous space serves as the ground for all of the other abstractions and rational functions of the human intellect, enabling every form of clear cut distinction as well as the very ability to express

such distinctions by means of language.⁸⁰ Until their recent integration into the civilized world, Australian Aborigines, the Bushmen of the Kalahari, the navigators of Polynesia and other primitive people were famous for having a sense of direction comparable to that of these non-human animals.⁸¹ As Rupert Sheldrake reports in *The Sense of Being Stared At*, Europeans who have gone hunting with the Bushmen in the Kalahari Desert of southern Africa have noticed that the tribe, whose encampment is as much as fifty miles away from the hunting site, seems to know whether or not the hunt has been successful.⁸² If it has been, preparations to welcome the victorious hunters begin to be made immediately so that by the time they actually return everything is in order for a ceremonious reception. When queried about this ability, the tribesmen who were somewhat familiar with the colonial culture *tapped their chests* and drew a comparison to the telegraph: “They know by wire. We bushmen have a wire *here* that brings us news.” There is a strong correlation between the technological development of artificial aids to navigation – such as signposts, maps, and compasses – and the atrophy of this primordial experience of directional orientation towards things of concern in their places.⁸³

There are passages in *Matter and Memory* that address this manner of orientation in the world, where Bergson offers insights that make more sense in the context of the foregoing natural history of remote perception and of *psi* ability in general. Bergson claims that what does not reveal itself within the extensive expanse of a being’s horizon of perception, is what that being is “unconscious” of in the very same sense as it cannot be mindful of certain past images, or their associated behaviors, on account of the specific tension of its consciousness.⁸⁴ As Bergson puts it: “there will no longer be any more reason to say that the past effaces itself as soon as perceived than there is to suppose that material objects cease to exist when we cease to perceive them.” He adds: “what can be a nonperceived material object, an image not imagined, unless it is a kind of unconscious mental state?”⁸⁵ There is also this striking remark: “Then, when a memory reappears in consciousness, it produces on us the effect of a ghost whose mysterious apparition must be explained by special causes. In truth, the adherence of this memory to our present condition is exactly comparable to the adherence of unperceived objects to those objects which we perceive; and *the unconscious* plays in each case a similar part.”⁸⁶ In other words, those places in the world that you are aware of but that lay beyond the

purview of your present perception are images enfolded in the unconscious state. The horizon of our perception is surrounded by another more expansive horizon, a twilight zone wherein abide images of which we are predominately unconscious.⁸⁷ There is also Bergson's statement that: "As far as deep-seated psychic states are concerned, there is no perceptible difference between foreseeing, seeing, and acting."⁸⁸

Such an understanding is also implicit in Heidegger's view of how orientation towards things of significance in our world remains basic to our experience of the "truth" or disclosure of those things. This becomes clear in a striking example of directionally oriented deserverence or "making-present" that he offers in the course of the Zollikon Seminars. Towards the end of elucidating the distinction between recalling [*Erinnerung*] and making-present [*Vergegenwärtigung*], Heidegger asks the seminar participants to "make present" the Zurich central train station (through which many of them have travelled on the way to the seminar). He asks them to bracket the interpretive overlay of their psychological, physiological, and epistemological knowledge and to simply consult their immediate everyday experience of envisaging this train station. The participants are queried and various individuals report experiencing a different aspect of the train station from a certain vantage point. Heidegger claims that this is no different whatsoever from seeing *this* book from a particular side and knowing that it is a whole book and not one damaged and missing a back cover, although I do not physically 'see' its back cover. He repeatedly insists that they will notice that such making-present directs them towards the train station itself, not towards a picture or representation of it. He also recognizes how offensive this unfiltered observation will be to the prejudices of most of the participants:

Making-present has the character of being-at... [*Sein-bei*], more precisely, of our being-at the station. This answer has made you rebel, and it continues to disturb you. You dispute that making-present has, or in any way even could have, something to do with being at the train station in Zurich. ...During the performance of this making-present, we are here at Boss's house. Surely, we are not at the train station in Zurich. No reasonable person wants to maintain that while making-present, we are transposing ourselves, as it were, to the station in order to be at and next to the station... And yet, our interpretation of making-present says that it is a being-at the station. We are, in a real sense, at the station itself.⁸⁹

Heidegger goes on to make clear that for the participants to fancy that they only think they are at the station or that they are at the station “only in thought” is not faithful to the experience that he has guided them into having. Simple phenomenological attentiveness to the making-present of the station is not an experience of “thinking” that one is standing in front of the station. There is no trace of such a thought, unless the interpretive filters of acquired ‘scientific’ knowledge that Heidegger has asked the participants to bracket are still functioning. Heidegger unambiguously states that to “think” one is present at the station in the sense of producing the station as an “imaginary representation” is “a totally different phenomenon than the making-present of the station.”⁹⁰ It is only because one is directed toward the station itself that, if after the seminar one needs to pick someone up at the station one is able to drive there at all. Otherwise, one would never arrive at the station. One does not drive towards a thought, or mere image, or representation of the station in one’s head. The possibility of having the station, or anything for that matter, present-at-hand is grounded in a more primordial possibility of engaging its presence even while it is physically absent. It is intrinsic to the characteristic openness of our *Da*-sein that we can make a remote location present while a very different location surrounds us as present-at-hand. Note this striking passage from the Zollikon Seminars:

During the making-present of the station, we are clearly, in fact, here inside this house. Yet, our *being* here offers us various possibilities. We can participate in the discussion, look at the clock, and follow how one of our colleagues answers a question directed to him. We can also make-present the Zurich train station... In this case... we are here inside Boss’s home and simultaneously at the Zurich train station... Our being here happens continuously and necessarily in such a strange and even wondrous way. Our being here is essentially a being with beings which we ourselves are not. This “being at” is usually characterized by the bodily perception of things physically present. But our being here can also engage [*einlassen*] itself in being with things not present physically. If this possibility did not exist and could not be performed, then, for instance, you could never arrive at home this evening.⁹¹

If we look back at Part One, Division 1.6 of *Being and Time*, particularly section 44 on “Dasein, Disclosedness, and Truth”,⁹² we see that this understanding of the way in

which we draw things of concern near to us in a clairvoyant experience of them, despite their abstract spatial remoteness is, albeit esoterically, central to Heidegger's existential conception of Truth as "unconcealment" or disclosure. A critique of Descartes and Kant's Neo-Cartesianism on the question of the Reality (*res*) of the external world is the context for this exposition. Heidegger refers to Kant's "Refutation of Idealism" as an attempt to address what Kant takes to be the greatest scandal of philosophy: that no one has yet been able to prove the reality of the 'external' world.⁹³ Heidegger thinks that the real scandal is not that no one has been able to provide such a proof, but that – beginning with the revolutionary subjectivism of Descartes – such proofs have been continually sought. According to Heidegger, even if Kant attempts to demonstrate the reality of changing things with reference to a persistently present transcendental subject, he follows Descartes in taking consciousness as a thing present at hand in the manner of objects.

Realism tries to address the question of the reality of the external world by turning the subject into a thing present at hand among other things, whereas naïve Idealism defines the subject only negatively as something indefinitely un-Thing-like. What Heidegger wants to show is that the *physical* and the *psychical* cannot be defined against or in terms of one another in this way. Idealists would be right if what they meant by ideality were the way in which our Being transcends entities, which are only encountered within a world that is more primordial than them and that they do not constitute in a piecemeal manner. Only a subject which has lost its sense of its being in the world would attempt to "prove" the 'reality' of this world as if it were something 'external' and constituted of entities. The *res cogitans* is world-less, and so there is no place for *res extensa* to be either.

The key example that Heidegger offers us in this section is of a person who knows that a picture is hanging askew on the wall despite the fact that it is behind his back.⁹⁴ The person has *not* physically perceived the picture that is askew, or at the very least he cannot observe that it remains askew at present. Yet, he knows that it is there, still hanging on the wall, but that something is not right with it. He can sense the tug of its imbalance behind his back. He may make a statement describing the condition of the picture. When he turns around so that it is possible for him to physically perceive the crooked picture, his statement is not "verified" by agreeing with some objective state of

affairs that it might have failed to correspond to. The psychical impression of the picture preceding the physical observation was not a ‘guess.’ His apprehension of the truth of the crookedness of the picture is only derivatively one of referential correspondence. What is more primary is that, while his back was still turned to the picture, he uncovered, discovered, or disclosed the picture. He was able to do so because, like the (potentially missing) back cover of the book that cannot be “seen” in the Zollikon Seminars, the picture may not be within the range of vision of the man’s eye organs, but it *is* within the world *in* which his whole being is always already encompassed.

For the most part, what is uncovered is forgotten in such a way that it sinks back into concealment. As a consequence of this our predominant relation to things is a relationship to semblances, and so mistakes with respect to the condition of what we cannot physically perceive are common. Heidegger claims that pre-Socratic Greek thinkers such as Heraclitus and Parmenides understood this when they elaborated the idea of “truth” privatively, namely as *a-lethea* or an “un-concealment” which militates against a predominating concealment and a forgetfulness of what has been uncovered – our tendency to allow it to sink back into oblivion. Every “truth” has the violence of a Promethean act of theft, which breaks into and steals what has been covered up and secreted away. As Heraclitus puts it, “Nature loves to hide.”

Heidegger’s remarks on Wilhelm Dilthey’s understanding of Reality as “resistance” of what we “are out for”, betrays the implicitly biological character of this conception of truth. By “biological” I do not mean what Heidegger dismisses as “biologistic” – it is not a question of understanding the Real in terms of organic structures and drives that are reductively further analyzable in terms of the laws of Physics. Heidegger states, with shocking clarity, that Newton’s Laws – or any physical constructs – are not true before Dasein discovers or uncovers the world in terms of them.⁹⁵ In the absence of the uncovering *activity* of Dasein’s being in the world, these ‘laws’ do not even have the substantiality to be false. Nature does pre-exist these laws and *life* forms would be there even without our Dasein. This *life* would not, however, be the measurable and lawful ‘Nature’ of ‘natural science.’ Heidegger basically approves of Dilthey’s insight that ‘Reality’ is the persisting resistance of *life* at large to our active pursuit of our own finite purposes – including the calculative projection and technical manipulation of

entities. Our world, and the scientific mode of being in it, necessarily conceals other forms of life. It is what Maurice Merleau-Ponty refers to as our “life world” in his haunting uncompleted final text.

The explicit influence of both Heidegger and Bergson is evident in *The Visible and the Invisible*, where Merleau-Ponty claims to be making his way toward “the problem of the world.”⁹⁶ He elaborates on this by restating it as an attempt to understand how what is not nature is a “world,” and how a visible and an invisible world can be formed as well as what the relationship between them may be.⁹⁷ It is a question of how we have an openness to the world that does not preclude occultation, of how occultation can take place amidst the illumination of the world *as such*.⁹⁸ Upon reflection, the perception of things and the phantasms of imagination can be understood as two modes of “the ideality of the world.”⁹⁹ A reflection or meditation that understands the “world” as an ideality “liberates us from the false problems posed by bastard and unthinkable experiences” in accounting for these phantoms as apparitions of what objectifying thought marginally excludes so that it haunts what is taken as ‘objective reality’ by returning from its fringe.¹⁰⁰

The imaginary is framed as un-real and as consisting only of things “half-thought, half-objects, or phantoms... disappearing before the sun of thought like the mists of dawn” when “the real becomes the correlative of thought... [and] the narrow circle of objects of thought...”¹⁰¹ Our “power to re-enter ourselves” and our “power to leave ourselves” is intrinsic to the possibility of a world of lived experience – a “possibility of a wholly different type” than those framed in advance by objective thought, and one that maintains “a secret and constant appeal” to what is objectively taken to be “impossible.”¹⁰² Merleau-Ponty elaborates: “It is not because the world called ‘objective’ has such or such properties that we will be authorized to consider them established for the life world... And, conversely, it is not because in the ‘objective’ world such or such a phenomenon is without visible index that we must forego making it figure in the life world.”¹⁰³ This is relevant to all spectral phenomena, what Merleau-Ponty refers to as “bastard and unthinkable experiences” when they happen spontaneously rather than being elicited in a laboratory where they are apt to pose “false problems.”

The “seat of truth within us” is this “unjustifiable certitude of a sensible world common to us...”¹⁰⁴ Prior to being convinced by Descartes that thought is our reality, “our assurance of being in the truth is one with our assurance of being in the world.”¹⁰⁵ Our experience of “the true” – in distinction to error and falsehood – is primarily bound up with the tensions between our perspective on things and those of others.¹⁰⁶ The consciousness of “truth” – of a perspective over something that others ought to be in agreement with – presupposes an intelligible world of a kind that connects the perspectives of our private worlds and allows a transition between them, as in those instances when I enter the perspective of an other to offer him a response to a question that he has not yet voiced or a rejoinder to a thought to which he has not yet given voice.¹⁰⁷ This unjustifiable certitude of a sensible world that we have in common that is not any of our perceptible worlds and is thus in a sense an “intelligible” world – but not in an abstract sense – is what Merleau-Ponty refers to as “the perceptual faith”, a faith which science presupposes but does not elucidate.¹⁰⁸ The objectivism of science excludes just those phenomena that clue us into the common world that abides as the grounding for all ‘truths.’ Insofar as the scientist attempts to secure all things – including persons taken as things – in an “objective” manner, that is, as entities that are variables with algorithmically functional relationships to one another, he strips away as “phantasms” everything about beings as we encounter them.¹⁰⁹

In Merleau-Ponty’s view this objectification of beings involves a reciprocal subjectification of those phenomena that, from its perspective, remain invisible as if they were also things hidden behind certain of the objects and as if one could see through to them by gaining a certain angle on them.¹¹⁰ These are “psychological” phenomena when they are framed in terms of objectively conceived physical phenomena.¹¹¹ Yet the basic concepts at work in Psychology remain essentially as mythical as the governing ideas of archaic societies.¹¹² In their quest to grasp laws of subjective experience or the function of mental acts in terms analogous to physical laws, psychologists not only fail to recognize the mythic structures enduring in their methodology, they also render themselves incapable of forwarding an adequate social psychology of archaic cultures.¹¹³ Laboring under the assumption that the “magical” experiences of primitive peoples or their account of a primordial temporality very different from our own chronological

projection of time are merely “subjective” and a function of relative ignorance is going to foreclose not only an understanding of those cultures, but also an insight into the way that magic and mythical time are still at work, albeit in an occulted fashion, in contemporary modes of thinking, above all in Science.¹¹⁴

Merleau-Ponty notes that just as in the case of physicists, the psychologists can only circumscribe the irrational in an eliminative manner, in other words, *limit* it.¹¹⁵ They cannot exorcise it, as they wish to. This is because the “irrational” is itself constructed as the excluded remainder of both the objective and subjective modeling of nature; this *normalization* defines the “*paranormal*” as such. The task is not to affirm experiences of the irrational that break through this framing or “escape” it as another anti-scientific “psychical” order of facts in the manner that Spiritualism does when it opposes itself to the materialism that has become prevalent in the wake of Descartes.¹¹⁶ Rather, one must deconstruct the “objective” and the “subjective” idealizations together by demonstrating the manner in which they are constructed – rather than *given* – from out of the “life world.”¹¹⁷ This “life world” is that lived experience that we have through our field of embodiment – but *not* our bodies conceived of as “objects” that house “subjects.”¹¹⁸ The biologists are now more materialist than the physicists, who for their part have had to come to terms with the psychological dimensions of their work.¹¹⁹ Yet, Merleau-Ponty points toward the possibility of a new biology, or rather of an understanding of the lived body and of the flesh of the world – of the body as “our living bond with nature” – that would be beyond the distinction between objective and subjective, and would thus preclude a neat differentiation of “reality” from the phantasms of the imagination.¹²⁰

My relationship with the world is not a relationship with an object. It involves, as an ever-present possibility, “a sort of dehiscence” that “opens my body in two” so that it becomes not only my body looking and touching, but my body looked at and my body touched. In this intuitive “reflection” – as Bergson rightly called it – there is a leaving oneself and retiring into oneself, a kind of lived distance with respect to oneself.¹²¹ The body sentient and body sensed are two phases of a single movement that incorporates into itself the whole of the sensible, in other words the “flesh of the world.”¹²² My body is no more an object than the world is.¹²³ Merleau-Ponty notes how painters sometimes remark

on the way in which they feel looked at by the things that they observe so intently as if to capture their essence. He generalizes this insight of the artist.¹²⁴

It is possible for my vision to be “seduced” and “captivated” by the things it sees in such a way as, instead of encountering them as an “outer surface”, I “emigrate” into things and “exist” through them so as to look back at myself from out of them. This phenomenon of my being “alienated by the phantom” reveals the world as “flesh” or as the dehiscence of my embodiment. More than once, Merleau-Ponty claims that traditional philosophy has no name to designate what he is here calling “flesh.”¹²⁵ This flesh of the world is not matter conceived of as corpuscles that collectively constitute beings. Neither is it a “psychic” material conceived of in opposition to this matter, nor is it a representation for a mind since if it were the latter it could not capture the mind that represents it the way that its Visibility does capture the body that ordinarily is the looker. If we were to think of it in terms of substance, which it is *not*, this flesh would appear to be “the union of contradictories.”¹²⁶ It is rather an “element” in a sense close to the ancient elements of earth, fire, water, and air.

By this Merleau-Ponty means that it is somewhere between the idea conceived of conceptually (the abstracted idea) and the spatiotemporally located individual that is taken to be an instantiation of this idea. He goes on to identify this “idea” with the invisible that figures into the title of his text: “The Idea is this level, this dimension. It is therefore not a *de facto* invisible, like an object hidden behind another, and not an absolute invisible, which would have nothing to do with the visible. Rather it is the invisible *of* this world, that which inhabits this world, sustains it, and renders it visible, its own and interior possibility, the Being of this being.”¹²⁷ He compares the idea in this sense to musical ideas that we do not possess but that possess us in the way that the virtuoso musician experiences possession when he “is no longer producing or reproducing the sonata: he feels himself, and the others feel him to be at the service of the sonata; the sonata sings through him or cries out so suddenly that he must ‘dash on his bow’ to follow it.”¹²⁸ The cohesion of the idea is “a cohesion without concept” of the kind that we find in “the moments of the sonata.”¹²⁹ This is also the nature of the cohesion of my body with the world. It is “an ideality that is not alien to the flesh, that gives it its axes, its depth, its dimensions.”¹³⁰ This element brings a “style” of being with

it that makes facts have a meaning and be ‘true’ about something in a certain way; this “flesh” is what Heidegger calls *facticity* or the possibility that allows for a fact to be a fact and not just a fragment. He also evocatively describes it as a “rarefied flesh” and a “glorified body” that come together with “the massive flesh” and the “momentary body” that we ordinarily experience.¹³¹

The “primordial property” that belongs to the flesh “of radiating everywhere and forever,” which effects “the reversibility of the visible and the tangible” is also what allows me to have a relationship to the other as if he were my *alter ego* because “it is not *I* who sees, not *he* who sees, because an anonymous visibility inhabits both of us... which extends further than the things I touch and see at present.”¹³² It is what makes it possible for us “to be open to visions other than our own.”¹³³ This reversibility is also that of “sound and meaning,” or “speech and what it means to say”, so that if I am close enough to the other I can hear his meaning even if he has not spoken it in words and the “sayable” has metamorphosed into “a gaze of the mind, *intuitus mentis*.”¹³⁴ Even the possibility of psychokinesis seems to be implied by this understanding of worldly embodiment as “the flesh”, when Merleau-Ponty adds that: “there is even an inscription of the touching in the visible, of the seeing in the tangible [that] founds transitivity from one body to another.”¹³⁵ Finally, recognizing the folding of the “actual, empirical ontic visible” back on itself into an invisible that is not its shadow but what principally renders it possible, takes us beyond the duality of thought and extension just as it deconstructs the dualist distinction between the visible and the invisible, revealing them to be the obverse of one another.¹³⁶ Merleau-Ponty observes that when I think of a certain place unreflectively and in an absorbed manner, I am not *in* my thoughts but at the place even if my body is sitting at this table and my gaze ought to terminate at the density of its surface.¹³⁷ The horizon of all such “visions or quasi-visions”, among which clairvoyance or “remote viewing” ought to be counted, is still the natural and historical world that I inhabit.¹³⁸ That the observable world can withdraw in visions that allow us to be present at places other than those wherein a scientist would locate our measurable bodies, so that we lose our spatiotemporal reference markers in such a way as to wonder whether we have ever really had them in the sense that we thought we did, brings us to ask whether

any sharp distinction ought to be legitimately drawn between the world of perception and the fabric of dreams.¹³⁹

The purest ideality is still not free from horizon structures: “It is as though the visibility that animates the sensible world were to emigrate, not outside of every body, but into another less heavy, more transparent body, as though it were to change flesh, abandoning the flesh of the body for that of language, and thereby would be emancipated but not freed from every condition.”¹⁴⁰ With reference to Heidegger, Merleau-Ponty recognizes that “there is no essence (*wesen*), no idea, that does not adhere to a domain of history and of geography.”¹⁴¹ This does not mean that ideas so situated are therefore inaccessible to those in other domains than the ones relevant for these essences, but that in view of the fact that “the space or time of culture is not surveyable from above,” any more than that of “nature” is, it remains the case that “communication from one constituted culture to another occurs through the wild region wherein they all have originated.”¹⁴²

4.3 Poetic Folklore as the Life World Horizon of Historical Peoples

Reflection on Science remains the task of *the thinker*. Heidegger defines *reflection* as “the courage to make the truth of our own presuppositions and the realm of our own goals into the things that most deserve to be called into question.”¹⁴³ This means bracketing the working assumptions scientists have received from their institutionalized training even if, and especially when, they seem to function *too* perfectly. Heidegger believes that the danger of predominating efficiency is that man may himself be insidiously taken up as feedstock within the Network. This can only be averted if we find another sphere from out of which we can reflect on technological Science so as to understand in what relation its essence stands to our existence. That is problematic because, by definition, *techne* as technological science en-frames every-thing in the world, and even makes ‘world’ itself appear as if it were an object subjected to technical research and development (as in ‘virtual worlds’ or ‘terraforming’). Heidegger’s way of dealing with this conundrum is to remind us that, for the Greeks, *techne* still also meant the crafts of building and cultivating. *Techne* as technology is a modification of *techne* as Art – in the widest Greek sense of *poesis*, which includes ‘fine art’ as another modality.

In “Building, Dwelling, Thinking” (1951) Heidegger notes that the Greek word *techne*, the technique that gives rise to technology, is derived from *tec*, the root of the Greek verb *tikto* – meaning “to bring forth or to produce.”¹⁴⁴ In technology as a mode of world-revealing, we apprehend that we *produce* our being. Heidegger sets forth poetry, in the wide sense of the Greek word *poesis* – a creative bringing-forth – as “*the distinctive kind of building*” definitive of human dwelling.¹⁴⁵ In “Poetically Man Dwells” (delivered in the same year), Heidegger evokes how creative vision precedes and grounds technical building endeavors, since the poet takes a measure for all other measures.¹⁴⁶ These remarks develop a theme introduced years earlier, in “The Origin of the Work of Art” (1935), which is largely an inquiry into the relationship between technical equipment and works of art.

In “The Origin of the Work of Art,” Heidegger reminds us that the Greeks used the word *techne* for both art and technology, and *technites* for both the artist and the maker of manufactured equipment.¹⁴⁷ Both artwork and technical invention are modes of crafting and thereby bringing-forth into unconcealment something whose being is not evident, i.e. not natural. For Heidegger, the key difference between equipment and art is that equipment is so designed that its createdness – its work on an undefined material – disappears in its usefulness (for so long as the equipment does not break down), whereas the work of art somehow preserves its createdness within itself.¹⁴⁸ This may be related to the fact that great works of fine art (the ones with which Heidegger claims to be solely concerned) do not have any particular use. So when we are confronted with them, *that they are created* is thrust to the fore.¹⁴⁹ Since this is uniquely true of the work of art, the artwork alone reveals the nature of Creation. Heidegger understands this in terms of strife between “world” and “earth,” which strife is preserved in the work of art.¹⁵⁰

I suggest that this “world” and “earth” are a transformation of Heidegger’s concepts of the *worldhood* of the world and *facticity* from *Being and Time*. As in *Being and Time*, where *worldhood* is constituted by discourse in its various modes and bounded by the hermeneutic circle, in “The Origin of the Work of Art” Heidegger takes poetry to be the essence of all art and then equates poetry with language.¹⁵¹ He does not mean that painting, sculpture, architecture, etc. are all derived from *poesy* – or poetry in the narrow sense of written or spoken poems – but that they are modes of poetic composition in a

more profound sense.¹⁵² Heidegger makes the significant claim that poetry – the essence of art – is always the poetry of a specific historical people.¹⁵³ As in *Being and Time*, he is clear that language is what is definitive of all existing beings, and so of all peoples, as opposed to stones, plants, and animals. Heidegger forwards the same view of poetic language as a uniquely “world-forming power” in *Logic as the Question Concerning the Essence of Language*.¹⁵⁴ Just as in section 74 of *Being and Time*, discourse never constitutes the worldhood of any Dasein in the abstract, but only as the particular *logos* of a certain historical people.¹⁵⁵

In “The Origin of the Work of Art” Heidegger repeatedly refers to “earth” as “native”, and as that element without which “world” would be unmeasured and lacking in sufficient lawfulness as to allow a people to resolutely make those grave decisions that define their historical destiny.¹⁵⁶ Thus “earth” is that facticity of the historical situation of the community of people into which Dasein is born and for which Dasein may die. Each Dasein must choose to affirm this facticity with commitment, or to evade it and allow it to sink into oblivion by ignoring it or by adhering to tradition unreflectively. “World,” or consciousness and the discourse in terms of which it understands anything, would tend to be universal and to universalize by means of concepts, but in order to produce anything authentic and abiding, it must accept as its horizon the concrete historical situation of a given people.

Heidegger’s discussion of a *horizon* that forgetfully conceals what lies beyond it and yet thereby also bounds and protects the *earth* in which the *world* of a historical people is rooted, seems to have been lifted right out of Nietzsche’s meditations “On the Uses and Disadvantages of History for Life.” Nietzsche begins that text with the striking image of cattle that are happy because they have no memory. If someone were to inquire of a cow as to why it just stands there gazing at him, the animal would be inclined to reply, “The reason is I always forget what I was going to say,” but then it would forget this too and remain silently staring at the human inquirer.¹⁵⁷ Such an animal lives *unhistorically* and “is contained in the present, like a number...”¹⁵⁸ Nietzsche associates the advent of the “it was”, or recollection, with an enduring experience of “conflict” and “suffering” that reminds man of “what his existence fundamentally is – an imperfect tense that can never become a perfect one.”¹⁵⁹ “A man or a people or a culture” can all

suffer from a hypertrophied memory that proves “harmful and ultimately fatal to the living thing.”¹⁶⁰ While the animal can live with hardly any memory, it is impossible to *live* without a great deal of forgetting: “Forgetting is essential to action of any kind, just as not only light but darkness too is essential for the life of everything organic.”¹⁶¹ Nietzsche posits as “a universal law” that: “a living thing can be healthy, strong and fruitful only when bounded by a horizon.”¹⁶² It is on account of this “rounded and closed” horizon that the ignorant peasant living vigorously amidst the Alps, whose judgments are false through and through, is far more capable of “a simple act of will and desire” than the man of knowledge who “sickens and collapses because the lines of his horizon are always restlessly changing, because he can no longer extricate himself from the delicate net of his judiciousness and truth.”¹⁶³

The degree to which “a man, a people, a culture” can afford to remember is proportional to what Nietzsche calls their “plastic power”, that is, their ability to “assimilate and appropriate things of the past” without being overwhelmed either by a bad conscience or having their potential for growth nipped in the bud by a historical sense of their own insignificance.¹⁶⁴ The clarity of conscience and confidence in the future without which an active life is impossible requires the persistence of an “unilluminable and dark” background to everything “bright and discernable”; this darkness which, as mentioned, above shelters life in the way that the earth is essential to organic growth, is what nature knows to forget in order to shape the horizon that protects a certain life form.¹⁶⁵ At one point Nietzsche explicitly refers to this as “the whole earthly and darkening horizon” of world-historical phenomena.¹⁶⁶ He also compares this earthly element to the nourishing ground in which the tree of our evolving being is rooted, without our being able to precisely determine from the size and strength of the visible branches just how deep the roots extend and in what directions.¹⁶⁷ The horizons of various forms of life can encompass one another and a life form that is “too self-centered to enclose its own view within that of another” will also wither away.¹⁶⁸ The “little vortex of life” whirls away – in the form of an artist painting, a general triumphing in battle, or a people struggling for its liberation – only amidst a “sea of darkness and oblivion” that is the “unhistorical, anti-historical” condition.¹⁶⁹

As Heidegger observes, when a work of art is displayed in a museum, or even when one goes to see ruins at their original site, they are no longer the works of art that they once were *because they have been stripped of their world*.¹⁷⁰ Works of art set up a world, but what is key in order to understand how this is related to technology, is that, every world is only the world of one particular historical people. Not all Dasein live in the same world, and there is not *one* world. The great creators of works of art – and since poetry has a privileged role, especially epic and tragic poets that craft a living folklore – are the founders of a people's existence, and in the founding moment their creative work runs ahead and implicitly, and in a concealed manner, carves out the scope of *that* people's historical destiny.¹⁷¹ The creators' individuality always disappears into their works, and the great works do not appeal to mere human beings as they ordinarily are, rather, they awesomely tower over them and define a community for all that its people can become in the course of their history or *Geschichte* – more literally, in the course of their “story.”¹⁷² They set the mood that holds sway over the flowering of a people's culture far into the future. In a sense the lore of a folk haunts them from out of their future and calls them to fulfill their destiny, or as Nietzsche would put it – *to become who they are*. Note these passages from *Logic as the Question Concerning the Essence of Language*, where in the course of explaining this idea Heidegger also offers us a key to exactly what he means by “earth” in “The Origin of the Work of Art”:

...We are determined, that is, at all times attuned-through by a mood [von einer Stimmung durchstimmt]. ...The misunderstanding arises that the so-called strong willed human beings, the doers, the cold-thinking humans are exempt from moods, that the mood is something feminine... A great work is only possible from the fundamental mood, ultimately from the fundamental mood of a *Volk*. ...We would not stand at all, if this standing were not attuned through by moods, by virtue of which earth, ground; in short: nature first bears, preserves and threatens us. ...the poet is not he who writes verses about the respective present. Poetry is no soothing for enthused little girls, no charm for the aesthetes, who believe that art is for savoring and licking. True poetry is the language of that being that was fore spoken to us a long time ago already and that we have never before caught up with. For this reason, the language of the poet is never of today, but is always in the manner of having been and futurally...¹⁷³

The "preservers" come after this founding moment. They are those who still understand the work of the creators, and for whom these works of art are still living in the sense that they are able to stand within the world-historical clearing of the work, and from out of this insight make those choices decisive for the historical victory or defeat of their own people.¹⁷⁴ "Victory" and "defeat" against whom? Well, it appears that for Heidegger, the strife in the work of art also becomes strife between historical peoples.¹⁷⁵ There is not only a strife between "earth" and "world", but one between different "worlds" each struggling to set themselves into the common "earth" – a struggle wherein each community is challenged to become more essentially what it is, or to perish in enslavement to another people and *its* world.¹⁷⁶ Think of the Aztecs and the Spaniards. In *Logic as the Question Concerning the Essence of Language*, Heidegger ventures an ontological interpretation of victory and defeat in "world war" in these terms, rather than the tactical superiority of armed forces arrayed against others on a battlefield: "...the World War as historical power has not at all yet been won, has not yet decided for the future of our planet. It will not be decided by the question of who has triumphed, but it will be decided by the trial, which the *Völker* are facing. The decision is reached, however, through the answer, which we give to the question of who we are, that is, through our being."¹⁷⁷ Given the 1934 date of the lecture, he is historiographically referring to the First World War, and yet his point is that this is not *the real world war* if one conceives of it in terms of military engagements of a limited duration decided by tactical superiority and concluded by a 'peace treaty.' In these terms, even the Second World War has not concluded the decisive confrontation over what the world of the Earth as a whole is destined to be. Moreover, it may happen that a certain group of people has such creative potential that its world experiences a rebirth repeatedly, after long periods of decline.¹⁷⁸ Heidegger sees Western history in these terms. Something of the glorious Greek beginning is still definitive of "the essence of Western art."¹⁷⁹

Heidegger sees *alethea* or "unconcealment" – the essence of Truth – as identical to the essence of Art.¹⁸⁰ In other words, the essence of all things 'true', the existential opening and the hermeneutical circle presupposed in every predication, requires the limiting of a "world" by an "earth" that "shelters" it by concealing things beyond the horizon of its form of life. As Heidegger says, untruth belongs to the essence of truth.

That is why the Greeks rightly understood the essence of truth as *a-lethea*, as a modification of predominating *lethea* or forgetful concealment, an idea which, as we have seen, he develops from out of Nietzsche. Heidegger draws a series of equivalences: the essence of art is poetry, and the essence of poetry – its unconcealing projection – is the essence of truth. Well, if poetry is always only the poetry of a historical people, and the work of art only sets up their *own* world, then it seems that things can essentially be "true" only for one or another nation.¹⁸¹ This suggests that the political State, whose founding Heidegger identifies as one type of artwork (*statecraft*), must be the total artwork [*Gesamtkunstwerke*] and the abode of that people's 'truth'.¹⁸²

Indeed, in *Logic as the Question Concerning the Essence of Language* we see Heidegger make the claim that a folkloric tradition, and the poetic mood through which it attunes people, first grounds their existence as 'individuals' that comprise a *Volk* in such a way that the whole is immeasurably more than the sum of any 'parts':

Precisely by virtue of mood, the human being is never an individual subject, but he stands always for-or-against-one-another, in a with-one-another. This is also valid when, as in longing, the other is not yet immediately there. The being-with-one-another of human beings is not in virtue of the fact that there are several human beings, but several human beings can only be in community, because being-human already means: attuned being-with-one-another, which is not lost, if a human being is alone... the human being is set out beyond himself [he ex-ists] in tradition... This being is never subject, nor an assembly of several subjects, who by virtue of agreements first ground a community, but the originally united being, transported, bearing exposure, and carrying mandate can only be what we call "a *Volk*." Only in virtue of this being, of the determination, can individuals as well comport and experience themselves as individual. ...The being of beings is transferred to us. Being, as a whole, as it rules through and rules around us, the ruling wholeness of this whole, is the world. World is not an idea of theoretical reason, but world announces [kündet] itself in the lore [Kunde] of historical being, and this lore is the manifestness of the being of beings in the mystery. In lore, and through it, world rules. This lore, however, happens in the primal-event of language. In it, the exposure into beings happens, the delivering over to being happens. World rules – *is* a being. ...Language is the ruling of the world-forming and preserving center of the historical existence of the *Volk*.¹⁸³

Either Heidegger is trading in preposterously inflated platitudes or he is saying something so shocking that it seems to have been missed by any commentator that I am aware of: There is no stable “earth” or *nature* – the equivalence is his own – that can be encountered *as it is in itself* underlying the “worlds” that shape it. Folklore grounds our existence, in the quite literal sense that without it we would not be able to “stand” as the beings that we are. Furthermore, the poetic language of the geniuses that craft this lore in the context of a fundamental mood is a basically futural mode of expression, it is concerned with what is “to come” and with what we may *become* if we maintain a living relationship with our lore. That is impossible if it is handed down as a dead tradition, rather than a living heritage subject to revolutionary reinterpretations of its elemental structure in each epoch of the historical existence that it first establishes for us on our way to becoming mythical more-than-merely-human beings envisioned, as it were, through a glass darkly – on our way to giving birth to heroes and striving with gods. This is what lurks behind that otherwise cryptic remark in *Being and Time* on Dasein having to “choose its hero.”¹⁸⁴

These are not word games. They present us with an ontological account of the relationship between social consciousness, time, and the natural world. Heidegger is very explicit about the fact that this ontology precedes any ‘scientific’ account of human being or its relationship to nature.¹⁸⁵ It is not as if a science of history comes after the being of human communities on the Earth as they are grasped by the so-called ‘hard sciences.’¹⁸⁶ Heidegger points out that the Greek word *historia*, whose German equivalent is *das Erkunden*, was originally used to refer to “exploring.”¹⁸⁷ In other words, exploration or discovery [*das Erkunden*] is always already historical in the sense of setting out on an adventure that both explores the lore [*Kunde*] of a folk and inspires it anew.¹⁸⁸ The explorers advance as heroes into those uncharted places marked by the warning: “There be dragons here.” Not only the so-called ‘science of history’ or historiography but also *all science in general* is grounded in this adventurous spirit of exploration and discovery as guided by a folklore that it enriches.¹⁸⁹

This observation regarding the status of History with respect to the sciences is another key idea that Heidegger has appropriated wholesale from Nietzsche’s untimely meditation “On the Uses and Disadvantages of History for Life.” There, Nietzsche

already recognized that the demand that “history should be a science... the science of universal becoming” threatens to weaken the present and to deprive “a vigorous future of its roots.”¹⁹⁰ In order to remain “believers in deeds and progress”, we must recognize that the “process” of “an evolving culture” is always “dominated and directed by a higher force” than what can be comprehended by any History with the pretensions of being a “pure, sovereign science.”¹⁹¹ Such a “pure science” of History, which aspired to the standard set by “mathematics”, would “be for mankind a sort of conclusion of life and a settling of accounts with it.”¹⁹² Every people that wants to continue growing requires “an atmosphere around them, a mysterious misty vapour... [an] enveloping illusion, a... protective and veiling cloud.”¹⁹³ Those whose motto is “let truth prevail though life perish” are engaged in a futile endeavor, since *life* is the ultimate tribunal of the survival of all truths and it usually grants victory to those “dominated not by knowledge but by instinct and powerful illusions.”¹⁹⁴ Nietzsche defines “life” as “that dark, driving power that insatiably thirsts for itself.”¹⁹⁵ Life is destined to dominate science and not the other way around, since “knowledge which annihilated life would have annihilated itself with it.”¹⁹⁶ The question as to whether History can become a science forces us to reevaluate the status of the sciences as a whole and to conclude that “science requires superintendence and supervision; a *hygiene of life* belongs close beside science and one of the clauses of this hygiene would read: the unhistorical and the suprahistorical are the natural antidotes to the stifling of life by the historical.”¹⁹⁷ Nietzsche adds: “It is probable that we... will also have to suffer from the antidotes. But that we suffer from them is no evidence against the correctness of the chosen treatment.”¹⁹⁸

The historicizing of a community is not the sum of individual fates (as Being-with one another is not the sum of several subjects), and Dasein does not exist ‘in’ history. Rather, Dasein – as part of the story or lore of its people (*Geschichte*) – exists *as* historicizing and only on this basis is historiography (*Historie*) possible.¹⁹⁹ In order for historiography to be possible there must be a way of access to something that is ‘past’.²⁰⁰ Though this may seem to be a platitude, the answer to this question of the persistence of the past is by no means obvious and it should be very perplexing. If the past were a series of nows no longer present-at-hand, there would be no way in which a former now that was once present-at-hand but *is* no longer should be accessed. The way to the past is only

opened through Dasein's own fateful historizing – grounded in a futural temporality that makes present by having-been. Thus historiology is the study of Dasein that “has-been-there” – and it is only the study of artifacts in so far as they are involved with this Dasein.

Entities are only historical in belonging to a *world*. For example: ancient Greek housewares in a museum are still functional, but they are “historical” because the totality-of-involvements in which they had significance no longer exists. This *world* that is no longer is of course that of Dasein-that-has-been's *being-in-the-world*.²⁰¹ What is most disconcerting to the commonplace understanding is that this suggests that history is not primarily concerned with the past and its relation to today but arises from the *future* of Dasein's temporality.²⁰² One must project Dasein-which-has-been upon its ownmost *potential* and this potential must be experienced or opened anew by the futural projection of the Dasein ‘studying it.’ Even in presently selecting the object of historiology, as in all decisions, Dasein is futurally projecting based upon its own possibilities. Thus an authentic historiology is always a critique of a forgetful ‘present’ that mass man has uprooted from ossified and dead tradition, and the forging of a vigilant and dynamic relationship to living tradition that renders a renaissance of the “monumental” possible.²⁰³

This reference to the cultural revitalization effected by *monumental* history is more clearly explained by Nietzsche, who first defines this species of historical being in opposition to two types of what Heidegger critiques as pseudo-objective “historiology.” Nietzsche identifies “three species of history”, the *monumental*, the *antiquarian*, and the *critical*, none of which ought to aim at objective and unlimited knowledge – as if such a thing were possible – and all of which properly belong only “to the man of deeds and power, to him who fights a great fight, who needs models, teachers, comforters and cannot find them among his contemporaries.”²⁰⁴

Antiquarian history is that traditionally employed by conservatives. It is laudable insofar as a great people use it to preserve for their future generations those cultural conditions of growth that allowed for their rise to greatness.²⁰⁵ It affords one that rooted ancestral affirmation of one's own existence that encourages a meaningful life rather than one wherein everything is uprooted from a heritage and seems accidental.²⁰⁶ The danger is that, when a living heritage becomes a hardened tradition that chokes further growth, antiquarian history can mummify life rather than conserving it.²⁰⁷ This unreflective

adherence to tradition sees all greatness as lying in the past and views history as a constant battle to slow the decline from this “golden age.”²⁰⁸

The opposite danger is presented by critical history. If Nietzsche had lived longer, he would certainly have associated its abuse with Marxists who furthered the Hegelian tradition that he already explicitly criticizes for its conception of a “world process” that aims at a universal end of history.²⁰⁹ Used properly, historical criticism limits forgetfulness to a bare minimum and “takes the knife to [the] roots” of a people by intensifying the causal analysis of events to the point that it deconstructs everything inherited that it takes to be oppressively unjust, such as “a privilege, a caste, a dynasty,” and thereby liberates people for future development.²¹⁰ What the critical historians fail to realize is that this destruction of a heritage always actually means an attempt to implant a new habit in a people so that it becomes instinctual or “second nature,” and that every first nature was once actually a victorious second nature of this kind.²¹¹ They are deluded by the Hegelian faith that world-history is dialectically converging on a unification of the spirit of all peoples in a self-conscious and self-correcting abstract conceptual knowledge that, in retrospect, frames “every success [as] a rational necessity” and “every event [as] a victory of the logical or the ‘idea’ [in a purely abstract sense].”²¹²

It is inherent to *life* or nature that we will forever remain “unconscious” of certain aspects of it that could literally be called *incomprehensible*; evolutionary growth through striving for the “great and the impossible” is grounded in the persistence of such unconsciousness.²¹³ The Hegelian (and Marxist) delusion that we will reach a point where “there are no longer any living mythologies” because art and religion have been subsumed by a scientific History or a historical Science fuels attempts to obliterate the bounded life world horizon of a culture *without the will to replace it with a new and perhaps broader, horizon of life.*²¹⁴ Nietzsche levels this charge against “a history which, lacking the direction of an inner drive to construct, does nothing but destroy.”²¹⁵ In a passage that holds up as an indictment of our contemporary critical theorists and proponents of so-called ‘postmodern’ deconstruction, many of whom claim to be his heirs, Nietzsche warns:

When the past speaks it always speaks as an oracle: only if you are an architect of the future and know the present will you understand it. ...only he who constructs the future has a right to judge the past. ...When the historical sense reigns *without restraint*, and all its consequences are realized, it uproots the future because it destroys illusions and robs the things that exist of the atmosphere in which alone they can live. ...If the historical drive does not also contain a drive to construct, if the purpose of destroying and clearing is not to allow a future already alive in anticipation to raise its house on the ground thus liberated, if justice alone prevails, then the instinct for creation will be enfeebled and discouraged. ...only if history can endure to be transformed into a work of art will it perhaps be able to preserve instincts or even evoke them.²¹⁶

Unlike antiquarian history, with which it is often confused, monumental history is actually concerned with *the future* – but with a future that has a real potential for growth on account of its being rooted deeply enough in a native soil and its being protected by a world-historical horizon sufficiently bounded by a living mythology. For this reason, Nietzsche accords *monumental* history priority over both the antiquarian and the critical modes of historical consciousness.²¹⁷ They ought only to augment it. Whereas antiquarian historians are conservatives who, at best, only know how to *preserve* life by nourishing its roots, those who make and use monumental history are revolutionaries.²¹⁸ Monumental history weaves events together with a view to a meaningful whole after having simplified these events into symbols with elemental power, with disparate events in different epochs being accorded an analogical symbolic significance.²¹⁹ So-called ‘historians’ whose research amasses detailed facts have their proper place in serving the genuine historian who is a masterful artist capable of crafting such a narrative of the past with a view to inspiring vigorous action in the present, action that is above all directed towards a certain vision of the future.²²⁰ Remarking on his own early professional life as a classical philologist, Nietzsche claims that the real purpose of “classical” studies is to act counter to one’s time and “for the benefit of a time to come” on the basis of the knowledge acquired.²²¹

Although he is writing nearly a half-century after Nietzsche’s untimely meditation on History, Heidegger concurs with him that we have amassed more historiographical knowledge than at any other era, but we are also more historically impoverished than the people of any past epoch in our civilization.²²² An account of happenings in the lore of a

people may be esteemed “incorrect” from the scientific standpoint of historiography, but lore always expresses the historical *happening* of a people more essentially than History books of scientific ambition that may offer extremely detailed causal accounts of events but, for all that, fail to be in the least historical and do not at all reflect what really *happened*.²²³ What Heidegger means by “happening” and “happened” here is that lore is always about the *becoming* of a people and their *coming to be*.

It is in this sense that we ought to understand the central claim of Heidegger’s magnum opus, namely that *time is the horizon of being*, because “the understanding of being itself is taken *from time*”²²⁴ or to put it more elaborately: “the most essential, deepest, and broadest concept of our understanding, activity, and thinking, the concept of being, is created from a certain idea of time.”²²⁵ The entire unpublished second half of *Being and Time* was supposed to undertake a deconstruction of the ontologies of the fundamental thinkers of our tradition with a view to their understanding of time because:

The concept of temporality itself not only determines the idea of historical being, but, in general, the idea of what being, nonbeing, and becoming mean. Time is the leading realm within which we understand being. Insofar as the time-concept changes in history, the concept of being and our fundamental position on beings will alter as well.²²⁶

Primordial temporality is the horizon of our being-in-the-world and that from out of which entities within-the-world are disclosed. In other words, Dasein’s transcendence of the world through its temporality is the condition for the possibility of its spatiality. However, the faculty of Understanding – which is always already interpreting everything – not only interprets entities within-the-world as objects present-at-hand “within time”, but it also consequently objectifies its primordial temporality as a “world time” wherein things occur sequentially. On Heidegger’s view a particular entity “within time” that is key for this conceptual development is the Sun. Its movement and the alternation of day and night become the basis for counted time. Ultimately the technology of the clock takes over this function and firmly establishes a conception of Time as a series of nows.²²⁷ The problem arises when Dasein forgets that the making-present (at hand) of primordial temporality is the basis of its interpretation of “world time” and of entities “within time.” Dasein then counts itself in as just another entity occurring *in* Time. One makes the

mistake of thinking that one can be ‘at a given place at a certain time,’ a misconception implicitly grounded in an acceptance of the Cartesian view of the way that space and time are bounded together in a mathematical grid. If time were really a series of nows, its infinite regress would force us to think of it as without beginning or end. Moreover, it should also be just as easy to reverse Time so that the succession of instants becomes a regression. Yet, Heidegger notes, one rightly speaks of time as “passing away” and its evident irreversibility evinces a Time that is both always prior to any given instant and that is futurally-oriented.

By losing a living connection with our lore, we are *alienated* from what we are becoming and from the things to come. If we learn to see “history no longer as an object, but as a happening, as our, the *Volk*’s being” then we will recognize “that which has been as [the] future of our own being” because: “That which essences from earlier on determines itself from our future.”²²⁸ This is to say the same thing as Heidegger does in what may be the single most revolutionary statement in *Being and Time*: “But if [destiny] constitutes the primordial historicity of Dasein, then history has its essential importance neither in what is past nor in the “today” and its ‘connection’ with what is past, but in that authentic historizing of existence which arises from Dasein’s *future*.”²²⁹ In this historical happening that grounds our existence: “Our be-ness and our future do not have the character of two periods, one of which is already vacant and the other that first has to be occupied, but that which essences from earlier on is *as* future of our own being.”²³⁰ Realizing that “we must experience ourselves as those who determine themselves from the future” involves “a transformation of our whole being in its relationship with the power of time.”²³¹

Nietzsche was already calling us to this revolution when he demanded that rather than remaining “pupils of declining antiquity” our understanding of the past should be oriented towards a higher goal in the distant *future* so that once we have redeveloped “the spirit of Alexandrian-Roman culture” we can “as a reward be permitted to set ourselves the even mightier task of striving to get beyond this Alexandrian world and boldly to seek our models in... *an essentially unhistorical culture and one which is nonetheless, or rather on that account, an inexpressibly richer and more vital culture.*”²³² This is to do consciously, and while remaining rooted in a living lore, what critical historians do

despite themselves in an unconscious and uprooted manner: “It is an attempt to give oneself, as it were *a posteriori*, a past in which one would like to originate in opposition to that in which one did originate.”²³³ In addition to the unhistorical “art and power of *forgetting* and of enclosing oneself within a bounded *horizon*,” the dominance of life over the historical also demands a *suprahistorical* turning of the eye away from inchoate becoming towards the enduring symbolic power of religious art.²³⁴

The futural projection of a foundational heritage for one’s existence is grounded in the recognition that our being is *in itself* abyssal and entirely lacking in any foundational nature that would drive the putative process of world history towards some point that renders individual personalities and concrete historical peoples mere means to an end.²³⁵ Rather, a single “republic of genius” wherein one “giant calls to another across the desert intervals of time” extends throughout history above “the excited chattering dwarfs who creep beneath them,” so that: “It is the task of history to be mediator between them and thus again and again to inspire and lend the strength for the production of the great man. No, the goal of humanity cannot lie in its end but only in its highest exemplars.”²³⁶ Nietzsche repeatedly states that the rebellion of even only a hundred such men banding together as the youthful vanguard of a single generation could reverse our cultural decline and bring about a new Renaissance.²³⁷ This civilizational revitalization ought not to be insular and narrowly focused on some revival of Greek or Roman culture or the cultivation of a uniquely German culture. Nietzsche argues that what made the Greeks so extraordinary in the first place was the fact that “their ‘culture’ was, rather, for a long time a chaos of foreign, Semitic, Babylonian, Lydian, Egyptian forms and ideas, and their religion truly a battle of all the gods of the East,” and yet, in the end “Hellenic culture was no mere aggregate” because:

The Greeks gradually learned *to organize the chaos* by following the Delphic teaching and thinking back to themselves, that is, to their real needs, and letting their pseudo-needs die out. Thus they again took possession of themselves; they did not long remain the overburdened heirs and epigones of the entire Orient; after hard struggle with themselves and through protracted application of that oracle, they even became the happiest enrichers and augmenters of the treasure they had inherited and the first-born and models of all future cultured nations... and... achieved victory over all other cultures.²³⁸

Chapter 5. The Specters of Technoscience

What is so revolutionary about the transformative power of modern technological science is that it utterly uproots, deconstructs, colonizes, and assimilates the worlds of all other traditional cultures. Even within our own civilization, the effects of technological science on cultural heritage are widely taken to be destructive. Yet, as I argue, the essence of technology, which grounds Science, is not something ahistorical or culturally “neutral.” In his writings on technology, and in the very late *Der Spiegel* interview that he consented to have published only posthumously and that reads like a last will and testament, Heidegger intuits that the essence of Technology is something superhuman. Every culture is technological insofar as it is predicated on tool use rather than pure instinct. However, Heidegger recognizes that the essence of Technology, in other words its utmost defining potential, has been developed only in our own civilization – in an arc that begins with the rationalistic interpretation of form and its relationship to matter in Platonism and ends with Descartes’ framing of the (totally objectified) ‘reality’ of the whole world as a legitimate question. Such a question can only be asked by a being that has taken the place of the Platonic demiurge and is no longer merely human.

This metamorphosis is superhuman, gigantic, or *titanic* in aspiration. Far from requiring us to abandon scientific research and development, this gigantism is the very essence of Technology. We ought rather to become self-conscious of the specters of Prometheus and Atlas as the hitherto occulted aesthetic ideas of anticipatory projection and world building. This is not a purely intellectual or speculative realization. If Bergson is right that, although intellect has been developed at the expense of animal instincts that we now see as “paranormal”, these abilities can return to us – dialectically, as it were – at a higher level commensurate with our technical development if we cultivate our intuition, then Prometheus and Atlas have another significance as well. Bergson saw the universe as a machine for making gods, and called us to become self-conscious with respect to the creative force of our biological *and* *psychical* evolution into a future race of supermen.

The scientific revolution occasioned by a serious engagement with paranormal phenomena – a revolution that marks not another episteme shift but the dawn of self-consciousness with respect to the forces unconsciously projecting paradigms and building models of nature – will also have to be a sociopolitical revolution. In fact, this radical transformation of scientific practice has as its precondition the most revolutionary political event in the recorded history of any culture. Drawing on Jacques Derrida’s discussions of *specters* and the *spectral* in his book *Specters of Marx* and a closely related earlier essay on “Telepathy”, I propose the idea of a *spectral revolution* to come. Derrida uncovers Freud’s ultimate acceptance of the paranormal and his admission that it is key to the revolutionary exploration of the unconscious proposed by psychoanalysis. The Copernican and Darwinian revolutions each had traumatic social impacts, but the social consequences of a scientific revolution that would realize the inextricability of the problem of the paranormal from the problem of the unconscious in general, threatens to collapse the distinction between the socially functional ego and the seething abyss of the unconscious. The spectral force of Technoscience has hitherto only operated unconsciously and this unconsciousness is sustained by the belief that science affords us a theoretical mirror of Nature.

Contemplation of the spectral is, as Derrida suggests, an opportunity for a new experience of temporality, one with a utopian promise. Our primordial experience of time places us outside of ourselves in a way that gives us an uncanny sense of not being at home, but the spectrality of this endurance outside of any chronological jointure also allows us to hear the voice of the other within ourselves. Telepathy, precognition, and other such spectral phenomena return to haunt us because they have been repressed by conceptual thought, which is intrinsically incapable of grasping them. Their promise for scientific practice lies not in developing new concepts for a more rigorous Parapsychology but in effecting a reversal wherein we realize that in the context of these *natural* phenomena that cannot be captured by the mesh of the anticipatory framework projected over nature, that framework or set-up itself appears as what is most ghostly.

5.1 The Superhuman Essence of Technology

On September 23, 1966, Heidegger granted an interview with *Der Spiegel* only on the condition that it would not be published within his lifetime. Under the title “Only a god can save us now,” it was printed on May 31, 1976 – five days after his death. This final interview is in some sense Heidegger’s “last will and testament.” The interview largely concerns “the situation of man in the world of planetary technology” and the attempt to “achieve a satisfactory relationship to the essence of technology.” Heidegger sees “democracy” both under the guise of Communism and of ‘Americanism’ as forms of “the planet-wide movement of modern technology.” He explains that the reason why both of these political systems fail to be anything other than conduits for the further alienation and instrumentalization of man is that “behind them all, according to my view, stands the conception that technology in its essence is something that man holds within his own hands.” Whereas in fact, “this is not possible. Technology in its essence is something that man does not master by his own power.” When the interviewer brings up “the case of the Sorcerer’s Apprentice” as an example of how man never completely masters his tools, Heidegger corrects his misunderstanding with the following, hyperbolic statement: “modern technology is no ‘tool’ and has nothing at all to do with tools.”

This movement that is planetary in scope diabolically uproots man and renders him homeless in any and every land in which modern technology essentially takes root. Where seemingly universal and timeless truths predominate, where everything is taken in the same way by everyone, where a common design levels the differences between all peoples and draws them into a single framework, it is there that *alethea* – or a people’s capacity to wrest truths *to live by* from its world – would seem to be most endangered. Heidegger’s central but entirely tacit concern in his techno-scientific writings, is that the essence of technology endangers all historical peoples and the whole inter-national world order. The concrete existential situation that limited the hermeneutic circle for persons born with a given language and within a particular historical community has been blown out by the leveling and universalizing force of the enframing essence of technology. Enframing creates, for the first time, a world horizon common to all of humanity. Yet, this standpoint, which is the ground of Philosophy in the fulfillment of its historical mission, only encompasses others through its violent world-colonizing power. It is a

misunderstanding to think that Philosophy is somehow “neutral” or that the philosopher can avoid being what Plato understood her to be from the beginning – an imperiled warrior and a vigilant guardian even over the people’s gods: “The opinion is frequently held that philosophy, as the highest science, must be devoid of standpoint. One has wanted to raise this to a principle. However, there must be a standpoint; one cannot stand without a standpoint. It is not about freedom from a standpoint but about the fact that a standpoint is gained by fighting.”¹

Heidegger claims to know that “everything essential and of great magnitude has arisen only out of the fact that man had a home and was rooted in tradition.” The question, then, is whether in the face of “a world movement... that either is bringing about an absolutely technical state or has done so already”, there can be a counter-movement by means of which we may craft a new abode for habitation – a new homeland. The “mystery of the planetary domination of the un-thought essence of technology” is that “man is posed, enjoined and challenged by a power that becomes manifest in the essence of technology – a power that man himself does not control.” This is a challenge posed by something beyond the merely human, the specter of an occulted titanic agency that is the motor driving the developmental trajectory of *techne* through the histories of those people who trace their heritage back to the Greeks.

Heidegger recognizes that modern technology in the broadest sense of limitless technical organization and instrumentalization is the culmination of a developmental trajectory that uniquely arises from out of Greek Philosophy as it disintegrates into the disparate empirical sciences of modern Europe, which are in turn functionally reintegrated by Cybernetics. Philosophy, in its traditional academic sense, “is at an end” and can no longer offer a response to this development. Now that “the manner of thinking of traditional metaphysics has reached its term” and “the role of philosophy in the past has been taken over by the sciences”, a thinking that is at the same time “poetizing” is the only dimension from out of which the technological can be essentially “not set aside but sublated [*aufgehoben*], though not through man alone.” Heidegger did not see a “great” enough poetic thinker equal to this endeavor in his time; it remained a future task:

But the greatest need of thought consists in this, that today, so far as I can see, there is still no thinker speaking who is “great” enough to bring

thought immediately and in clearly defined form before the heart of the matter [seine Sache] and thereby [set it] on its way. For us today, the greatness of what is to be thought is [all] too great...

Philosophy will not be able to bring about a direct change of the present state of the world. This is true not only of philosophy but of all merely human meditations and endeavors... Only a god can save us now... I think the only possibility of salvation left to us is to prepare readiness, through thinking and poetry, for the appearance of the god or for the absence of the god during the decline: so that we do not, simply put, die meaningless deaths, but that when we decline, we decline in the face of the absent god.

...It is not simply a matter of just waiting until something occurs to man within 300 years, but rather to think forward without prophetic claims into the coming time in terms of the fundamental thrust of our present age that has hardly been thought through at all. Thinking is not inactivity, but is itself by its very nature an engagement that stands in dialogue with the epochal moment of the world.

Heidegger explains that what it was about German National Socialism that allowed it to at least attempt a socio-political reckoning with the essence of technology is the unique relationship of modern German thinkers and poets with the Hellenic heritage that is foundational to our civilization as a whole. From the late 19th century into the early 20th, Germany was both the most technologically advanced modern nation-state and the nation whose thinkers and artists were most intimately in dialogue with our Greek progenitors. Goethe, Hölderlin, Schelling, Schiller, Nietzsche, Klimt, and so many other Germans were engaged in the deepest excavation and renovation of Hellenic culture since the Italian Renaissance. An answer to the world-colonizing danger of technological development cannot come from some colonized culture lacking in an authentic generative relationship with the wellspring of *techne*: "I am convinced that only in the same place where the modern technological world originated can we also prepare a conversion (*Umkehr*) of it. It cannot happen by adopting Zen Buddhism or other Eastern experiences of the world. The help of the European tradition and a new appropriation of that tradition are needed for a change in thinking. Thinking will only be transformed by a thinking that has the same origin and destiny."

Heidegger claims that in order to effect this conversion (*Umkehr*), Art must once again become capable of breaking through the abstraction of space and making a place on

Earth for the sacred – an abode of meaning that can serve as the foundational context for the projects of a people.² The question is “where does art stand? What place does it have?” The *Der Spiegel* interviewer notes that Heidegger demands “something from art” that he “no longer demand[s] from thought.” Although Heidegger denies that he demands anything from art, there is certainly something to this observation.

The planetary dominion of Technology reveals the groundless praxical dimension of our existence. As noted above, for Heidegger, there is no simple return or retrieval. Once worlds are gone they are gone.³ More great paintings and great architecture are not what Heidegger has in mind as the response of *poesis* to the *techne* that has arisen on its basis. He admits that Hegel may essentially have been right that art is dead, at least as conceived in terms of these traditional art forms.⁴ In the age of all-encompassing enframing – “the age of the World Picture” – the earth that the artwork allowed to be earthy has been hollowed out by everything being made useful for everyone. No traditional art form can fill this void of Nothingness, and no existing historical people can escape its event horizon. Nevertheless, Heidegger has in the back of his mind some possible response of *techne* as *poesis* to *techne* as *scientia*.

There is one particularly cryptic, yet very significant passage in “The Origin of the Work of Art” where Heidegger suggest that, although painting, sculpture, architecture, etc. are all modes of poetry in the deepest sense, these existing forms of art may not exhaust the bringing-forth of *poesis*.⁵ What we do know, not only from Heidegger’s later essays, such as “Building Dwelling Thinking”, but above all from the *Der Spiegel* interview examined above, is that whatever this occulted and most original *poesis* is that is capable of transcendentally re-grounding techno-scientific development, it affords a return of the divinities. To my knowledge what no one has yet considered is how the divinities may return to us through this deepest and darkest potential of art, especially if – as we have seen in the *Der Spiegel* interview – Heidegger insists that this homecoming of the vanquished gods will not come about through an evasion of techno-scientific development but only by means of an apocalyptic encounter with its essence.

Indeed, in “The Question Concerning Technology” Heidegger himself flirts with the suggestion that scientific *thinkers* could cultivate a self-conscious and artfully affirmative relationship to technology as that which has rightly revealed the

groundlessness of our existence. He diabolically⁶ considers the possibility that only our most desperate abandonment to the frenzy of ubiquitous technology may be able to awaken us to what we really *are*.⁷ Heidegger describes this “turning” with the metaphors of a flashing glance [*Einblick*] of “insight into that which is”, insight into an event [*Ereignis*] that flashes-forth [*blitzen*] like a bolt of lightning, which it seems possible to miss. Heidegger asks: “Will we see the lightning-flash of Being in the essence of technology?”⁸ The destining of Enframing is not a “blind” or “completely ordained fate.”⁹ We could choose, at this moment, to accept the responsibility of being the sentinels of the abyssal and guardians over all unconcealment from out of concealment. Heidegger refers to this as a possibility that may be on offer “someday...in the future.”¹⁰ That “future” is now upon us. We are on the threshold of the most promising and perilous scientific discovery, the validation of paranormal phenomena as empirical evidence for the irreducibly irrational element of Nature that Heidegger refers to as “that which cannot be gotten around.”¹¹ The fiery *vajra* of the *Ereignis* is not something graciously granted by Zeus and his jealous companions. It must be stolen from the Olympians and brought down to Earth. The divinities to return *in* and *through* the essence of technology are the fraternal Titans: Prometheus and Atlas. They are the prehistoric gods *and the gods of the new age*, drawing together what Nietzsche called the “unhistorical” and “suprahistorical.” In fact my conception of Prometheus and Atlas as the aesthetic ideas or spectral archetypes of technological Science are somewhat similar – in form, not content – to the archetypes of Apollo and Dionysus as Nietzsche employs them in his early work, *The Birth of Tragedy*.¹²

As Heidegger recognizes, for the classical Greeks and for those dwelling in the Medieval age, man is looked upon by Being and apprehends what is present on its own basis as *hypokeimenon* or *subiectum*. Only for the man of *Der Neuzeit* does that which is come into being through his looking for it to be true according to some preconceived adequacy condition – such as *ego cogito (ergo) sum*.¹³ Representing is *coagitatio*, a making stand over against an object [*das Gegen-ständige*].¹⁴ The only way beyond modern subjectivity is to creatively reflect on its own incalculable specter of the “gigantic” or Titanic. There is a paradoxical gigantism about modern technology that is different from the ‘greatness’ of any previous age. It has to do with the annihilation of

great distances by the airplane or the bringing-near of “remote worlds in their everydayness” by flicking on the radio. The Titanic is tremendous and yet insidious; it erases itself in annihilating human scales of space and time. It assumes “disguises”, so that the gigantic is, for example, also implicated in the exceedingly small scale of modern particle physics, which is only opened up by gargantuan machinery – such as cyclotrons and super-colliders.

In *The Visible and the Invisible*, Merleau-Ponty echoes the way in which Heidegger sees the scientist assuming the position of a spectator above all things, so that taken together these things grasped as objects turn the world into a Great Object – what I would call an *atlas* of the world.¹⁵ For example, when different real world astronomical perspectives of those who observe the starry heavens are rendered commensurate with one another it is not in terms of a universal world but as the function of a methodology grounded in the assumption of the position of the great spectator.¹⁶ Whereas for a while this methodology seems to effect breakthroughs that allow us to observe both microphysical and astronomical realms closed to our immediate perception, as physics advances on these dimensions it is forced to confront the limit of its assumed objectivity by admitting the interdependence of the praxis of the observer and the observed phenomena. Insofar as the physicist attempts, on the basis of a philosophical ontology of materialism, to explain away these empirical discoveries by taking quantum ‘entities’ that well up from the flux of nature for milliards of a second and that are dependent for their manifestation on carefully controlled conditions of observation, the physicist is translating these intangible and elusive phenomena into localizable classical entities just of a much smaller scale and in terms of a much shorter interval of time.¹⁷ This projective transformation really entails assuming the aspect of a giant or titan with respect to the microphysical world.¹⁸ Similarly, when, as in the case of Einstein’s theory of relativity, the presumed possibility of the integration of the perspectives of two observers traveling over vast astronomical distances at different speeds – which is a precondition of concluding that time flows at a different rate for them – is dismissed as “merely psychological”, the approximation of the entire cosmos *qua Object* is being dwarfed by a gigantic observer that stands over it as if it were a scale model.¹⁹ Losing sight of “*that upon which we have an openness*” only “*that upon which we can operate*” is taken to be

Real.²⁰ Merleau-Ponty goes on to refer to this giant or titan whose “sovereign gaze” seems to find “the things each in its own time, in its own place, as absolute individuals in a unique local and temporal disposition” as the *kosmotheoros* or cosmic theoretical observer.²¹ This is the titanic specter of Technoscience, whose Janus faces I will unveil.

In the phenomenon of the Titanic, all merely quantitative exaggerating and excelling transforms into something qualitative – an invisible shadow or specter cast onto the subjected world. In “The Age of the World Picture,” Heidegger claims that: “By means of this shadow the modern world extends itself out into a space withdrawn from representation... This shadow... points to something else, which it is denied to us of today to know.”²² What we have, above all, been denied knowledge of is the “paranormal” or what, by definition, has been *occulted*. Only in light of what it shows us about the Abyss of the irrational in Nature can we see how agencies beyond the control of merely human machinations spectrally project the essential framework of all technoscientific endeavors. These *daemonic* agencies are Prometheus and Atlas. Our relationship to them can be transformed through aesthetic intuition.

5.2 Our Superhuman Potential

In Bergson’s view intuition is developed, above all, by artists who sympathetically break down the barrier that the artificial projection of space has placed between them and their models or subject matter in such a way as to grasp and express the vital force of the latter.²³ We are like the artists of the moments of our own lives; even an artist cannot foresee the final form that his portrait will take.²⁴ In living processes just as in the creation of works of art by a true genius, there is the same incommensurability between what comes before and what follows.²⁵ Addressing the inhabitants of the benighted planet Earth, Bergson writes: “Theirs the responsibility, then, for deciding if they want merely to live, or intend to make just the extra effort required for fulfilling, even on their refractory planet, the essential function of the universe, which is a machine for the making of gods.”²⁶ While Bergson at times speaks of man being the “term” or “end” of evolution, it quickly becomes clear that he does not mean human being as it exists at present, but rather *the human potential*.²⁷

Bergson thinks that telepathy and other phenomena studied in “psychical

research” have the potential to push science beyond a materialist metaphysics that was necessary for technical development but is now occluding our “observation of certain facts.”²⁸ These “facts” emerge as a consequence of the filter mechanism of the human brain and body getting out of order, so that the wider living world “beyond” leaks through in the form of “abnormal perceptions.”²⁹ Bergson refers to psychical research as opening up “the immense field of dreams.”³⁰ Resistance to psi comes mostly from an acceptance of the false reduction of the mind to an epiphenomenon of the brain organ, and also from the mechanistic Physics-minded scientists’ unwillingness to investigate phenomena that require taking into account irreducible factors of human personality, such as the will to trickery and fraud.³¹ If massively corroborated human testimony were to be considered worthless, History also would be inadmissible as a discipline of knowledge.³² Bergson thinks that even if only a few of the phenomena studied by psychical researchers were to be validated, this would justify belief in “the life beyond” – which would go a long way towards extricating man from a hedonism based on an at least tacit nihilism.³³

According to Bergson, the power or action of various life forms is proportionate to the degree to which they are able to contract many momentary perceptions into events of greater significance. This concentration of elementary changes proceeds by degrees in humanity as well. Only if we are able to reach into the past and to have a wealth of well-contracted events to draw from in memory, will our future be something other than an unconscious repetition of the past in another form.³⁴ We are not either completely free or totally determined in our actions, or both at the same time – as Kant would have it. There are *degrees of freedom*.³⁵ Based on their relationship to their primordial temporality, certain individuals may attain a state of greater freedom of action than others: “A man is so much the more a ‘man of action’ as he can embrace in a glance a greater number of events: he who perceives successive events one by one will allow himself to be led by them; he who grasps them as a whole will dominate them.”³⁶ His ability to do so would consist in his contraction of a greater number of images into discretely meaningful *events*, which succeed each other in a completely different manner than do abstracted instants of a homogenous time that is modeled on the contrivance of homogenous space.³⁷ With respect to human duration, these events are the fundamental ‘units’ of time. Scientific analysis of point-events is derived from, and informed by, our memories of these lived

events – those determinative of the researcher’s project, and not the other way around.³⁸

The empirical evidence that I discussed in the opening chapter presents us with substantive validation for Bergson’s view that a person’s character as exemplified in his actions enfolds within itself the totality of his past experiences, but only very few of these are open to his introspection.³⁹ This is why most men fail to understand themselves. While the whole of our past psychological life conditions our present, it does not do so in a necessarily determinant fashion and none of the past states can be discerned explicitly in particular elements of our present character.⁴⁰ “Our character [is] always present in all our decisions” insofar as it “is indeed the actual synthesis of all our past states.”⁴¹

The matter of fact that is humankind at present is an outcome of evolutionary contingencies that may have taken a different course, and in the course that they have in fact taken certain other humanoid possibilities of being have been siphoned off along the way, perhaps having been developed elsewhere.⁴² For example, a different humanoid evolution may have privileged intuitive knowing over intellectual knowledge.⁴³ One can imagine a human-like civilization developed on the basis of an exquisite instinct. The conscious existence that is the end of evolution is not that of human beings but that of the “gods” or “supermen” of which terrestrial humans at their present stage of evolution are only a partial and incomplete realization.⁴⁴ Our version of humanity can complete its evolutionary realization of the Superman only by correcting its particular imbalance, so that the psychological power of intuition is retrieved and developed to a level commensurate with our hypertrophied intellect.⁴⁵ We have not entirely lost our intuitive abilities, they flash forth at moments when intellect is insufficient in the face of some vital interest that is at stake.⁴⁶ Bergson writes: “On our personality, on our liberty, on the place we occupy in the whole of nature, on our origin and perhaps also on our destiny, it throws a light feeble and vacillating, but which none the less pierces the darkness of the night in which the intellect leaves us.” Moreover, there is no way to retrieve and then further develop our intuition by means of using our intellect. We may pass from intuition to intellect, but not the other way around.⁴⁷ The philosophical practice by means of which intellect may be reabsorbed in intuition is not a means of merely facilitating speculation; it aims primarily at increasing our power to live.⁴⁸ We can *embody* Prometheus and Atlas.

There is a transformation coming in comparison to which all previous revolutions have been but fleeting portents. It will demand not only the radical metamorphosis of the scientific enterprise through which it comes about but also the restructuring of every facet of human society. In fact, these are not two separate upheavals, or at least they ought not to be, for the coming scientific revolution is at once also a sociopolitical revolution that demands the self-conscious restructuring of our civilization around the spectral forces that have hitherto driven the worldwide development of technological Science in an occulted manner – namely Prometheus and Atlas. Only a civilization that at the highest level or, if you prefer, at its foundation, single-mindedly embraces the titanic world-building spirit of scientific exploration and discovery will be able to endure such a catastrophically dangerous realization of the human potential. But what is a *specter* and how are these fraternal titans central to the *spectral* revolution? Two texts of Jacques Derrida go some way in helping us think through these questions, his book *Specters of Marx* and a much earlier but closely related essay on “Telepathy.”

5.3 The Spectral Revolution

Derrida’s writing on “Telepathy” takes the form of a letter wherein all identifying markers of the woman to whom it is addressed have been removed, so that it is, as it were, an anonymously addressed open letter. The letter largely concerns Sigmund Freud’s work on Telepathy, as well as other related “occult” phenomena, and it serves as an opportunity for Derrida to intimately confess to the “angel” receiving his letter, in response to her own query as to what is changing in his life, that he has an increasing and unexpected interest in, and openness to, “all the phenomena formerly rejected (in the name of a certain discourse of science), to the phenomena of ‘magic,’ of ‘clairvoyance,’ of ‘fate,’ of communications at a distance, to the things said to be occult.”⁴⁹ He mentions, in particular, “the successful experiments the Russians and Americans” are carrying out to test ESP in astronauts stationed beyond the Earth as an example of how “science and so-called technical objectivity are now taking hold of it instead of resisting it as they used to...”⁵⁰ Derrida’s piece appears to be occasioned by a paranormal experience that he confesses to having had when he writes to the anonymous receiver: “...I’d told you on the telephone the day that you put your hand on the phone in order to call me at the same

moment that my own call started to ring through...”⁵¹ As I discussed in Chapter 1, in the context of Rupert Sheldrake’s research, in our own époque, this kind of telephone telepathy is probably the most common form of the phenomenon of telepathy in general.

Derrida admits to being as frightened by this “terrifying telephone” as Freud writes of being frightened by telepathy and of the occult in general.⁵² In Derrida’s view, Freud is “frightened, and rightly so” by the prospect that telepathic ability and kindred occult arts could be so mastered as to effectively become a “telematic *techne*” so that “one had at one’s disposal a *tekhne telepathike*.”⁵³ Derrida compares this horror to having access to a central computer of “the electric or magnetic medium” to which one could not cut the lines and which processes all messages between lovers everywhere.⁵⁴ Of the impossible intimacy that would be forced upon us by the recognition and normalization of telepathy, Derrida writes to the mysterious woman of the following concerns. We all hide things from each other, but to recognize telepathy would mean:

What you will never know, what I have hidden from you and will hide from you, barring collapse and madness, until my death, you already know it, instantly and almost before me. I know that you know it. You do not want to know it because you know it; and you know how not to want to know it, how to want not to know it. For my part, all that you conceal, and because of which I hate you and get turned on [*dont je jouis*], I know it, I ask you to look after it in the very depths of yourself like the reserves of a volcano, I ask of myself, as of you, a burning *jouissance* that would halt at the eruption and at the catastrophe of avowal. It would simply be too much. But I see, that’s the consciousness I have of it, I see the contours of the abyss; and from the bottom, which I do not see, of my “unconscious”... I receive live information.⁵⁵

Derrida admits that he had previously been ignorant to think that Freud’s anxious concern with telepathy has been limited to a few pockets in his writings, because indeed the ‘pockets’ are so numerous and substantial that one would have to conclude – together with Freud – that it is: “Difficult to imagine a theory of what they still call the unconscious without a theory of telepathy. They can be neither confused nor dissociated.”⁵⁶ The same “objectivist certainty” that resists the idea of the unconscious on account of a certain “system of science, the discourse linked to a state of science” has, he admits “made us keep telepathy at bay.”⁵⁷ Much to the consternation of the English

collaborator who would become his official biographer, the British neurologist Ernest Jones, in 1926 Freud finally publically avows his belief in telepathy and he does so by identifying it as an operation of the unconscious.⁵⁸

Jones had been concerned that such an avowal would loose the wolves of occultism into the flock of psychoanalysis.⁵⁹ Freud had been aware of this danger and had wanted to protect the fledgling field of psychoanalysis by concealing the depth of his interest in the occult for years. In the early 1920s, he writes a number of lectures on the paranormal for various venues but decides not to deliver any of them; these include: “Dreams and Telepathy”, “Dreams and Occultism”, and “Psycho-Analysis and Telepathy”.⁶⁰ The last of these was intended for presentation at the International Association, but Jones dissuaded him from presenting it.⁶¹ Telepathy was, in fact, for Freud the subject that “perplexed him to the point of making him lose his head.”⁶² Freud decides, amidst apologies for the scandal that it will cause, to finally break his public silence on the question after carrying out his own occult experiments with a medium, his daughter, and another of his close collaborators, Sándor Ferenczi.⁶³ In the course of these convincing experiments Freud discovers his own exceptional powers as a medium!

As Derrida relates, Freud wrote to Jones on March 15, 1925: “Ferenczi came here one Sunday recently. We all three [with Anna] carried out some experiments concerning the transmission of thoughts. They were astonishingly successful, especially those where I was playing the role of the medium and analyzing my associations. The affair is becoming urgent to us.”⁶⁴ Once his announcement of the following year has the ill-effect that Jones feared it would and begins to muddy the name of psychoanalysis in England by threatening to obliterate its distinction from occultism, on March 7th 1926, Freud writes another letter to Jones apologizing and instructing him to explain away the avowal as a private matter for Freud – such as, for example, his Jewishness or the fact that he is a smoker, so as to sever any necessary connection telepathy may be thought to have with psychoanalysis.⁶⁵ Derrida notes that, as is evident from both the tone and content of the letter, Freud’s claim that his “conversion to telepathy” is a “private affair” that is “in essence alien to psycho-analysis” is a piece of strategic coaching that is being relayed to a lieutenant who finds himself requiring a tactic of damage control to protect the ‘field’ at a time when its ‘scientific’ status would be endangered by the widespread

misunderstanding of the significance of telepathy and the occult in general.⁶⁶ In fact, as Derrida argues, by 1926 Freud had come to recognize the issue of telepathy as the key to the scientific revolution that ought to be wrought by the discovery of the unconscious on the part of Psychoanalysis.⁶⁷

Why? Because it makes us reconsider altogether what we even mean when we ask whether something is or was or will be a “real event.” Telepathy and related paranormal phenomena, such as premonitions, make us rethink the Event (*Ereignis*) and eventuality as such. If an exemplary telepathic and perhaps premonitory ‘dream’ is not strictly speaking a “dream” because it images an event that is now taking place elsewhere with others or may take place in the future with others or with oneself, then we have to begin to deconstruct the distinction that has been drawn, by Psychoanalysis itself, between dreams and the unconscious realm within which they operate on the one hand, and the waking ‘reality’ of conscious life on the other. Phenomena such as telepathy betray the dream-like character of waking life and recognition of them threatens to break the barrier between the conscious ego, with its protective armor, and the unconscious abyss of the id. Derrida identifies, as one disturbing implication of this, that the unconscious oedipal-type love of a father such as Freud for his own daughter, the expression of whose ultimate conclusion thus far as been bounded within the realm of dreams, may have to bleed into everyday life.⁶⁸ Again, as in the first passage cited from *Telepathy* at length above, Derrida is concerned with the significance of the occult or the occulted with respect to an impossible intimacy, a “fusional immediacy” wherein we would interpenetrate each other or come to recognize that, on some level, we already do.⁶⁹ Derrida refers to this insight that Freud stumbled on while it was still “too soon” and he needed to “delay the arrival of the ghosts [*fantômes*] en masse” in the ultimate “*Aufhebung*” or “the big Turn.”⁷⁰ This turning point is what I would like to call the Spectral Revolution.

In *Specters of Marx*, Derrida discusses how Humanity suffered three traumatic blows to its narcissism on account of scientific discoveries: 1) the *cosmological* trauma of Copernicus, which decentered the Earth in the cosmos; 2) the *biological* trauma of Darwin, which demonstrated the animal descent of man; 3) the *psychological* trauma of Freud, which discovered the tremendous power of unconscious drives and motivations over the conscious ego.⁷¹ I would argue that while the first two discoveries constitute

completed scientific revolutions, namely the Copernican Revolution and the Darwinian Revolution, in light of what Derrida claims concerning Freud's own recognition of the unfulfilled potential of recognizing the implications of telepathy and related phenomena for the unconscious and its rapport with the ego's staging of itself in everyday life, the revolutionary potential of the third discovery has been stalled. In *Specters of Marx*, Derrida picks up the question of Freud's concern with the occult and its relationship to the revolutionary potential of his discovery of the unconscious. Derrida draws together Heidegger and Freud in his observations that "there is no *Dasein* without the uncanniness, without the strange familiarity (*Unheimlichkeit*) of some specter."⁷² With reference to Freud's "Das Unheimliche" (The Uncanny, literally the "un-homely"), Derrida claims that that the ego "spooks" or is "spooked" by an *other* that is not quite itself, it is "inhabited and invaded by *its own specter*."⁷³

This spooky experience is a clue – no, *the* most important clue – to how oneself is "in the other, in the other in oneself."⁷⁴ Derrida links this relation to the other to existential temporality, by taking the latter to presuppose the *spectral*. Conceptual thought is incapable of grasping what defies the opposition between the *real*, and therefore *effective*, presence of something and its non-effective or inactual absence; the apparition and disappearance of the ghostly cannot be comprehended in terms of a temporal structure taken to consist of successively linked presents that are identical and contemporary to themselves.⁷⁵ Specters are always "untimely" under this view of time.⁷⁶ To put it crudely there are at once "several times of the specter."⁷⁷ The "times" of the "non-presence of the specter" are, for Derrida, a clue to arriving at a new understanding of temporality and historicity.⁷⁸

The 'logic' of the ghost calls for a rethinking of what an event is, one that understands what happens or manifests in a way that "exceeds a binary or dialectical logic... that distinguishes or opposes *effectivity or actuality* (either present, empirical, living – or not) and *ideality* (regulating or absolute non-presence)."⁷⁹ This 'logic,' which Derrida believes has to be exceeded so as to contemplate the spectral, is of "a limited pertinence" – a pertinence limited "by the fantastic, [or] ghostly..."⁸⁰ While the new thinking that experiences the event in relation to the "phantomatic" is a 'logic' of "novelty" – a way of understanding how it is that *new* things can and do ever *happen* – it

is “not necessarily opposed to the most ancient ancientness.”⁸¹ Later Derrida reiterates this manner of untimeliness of what is both archaic and futuristic: “It is a proper characteristic of the specter... that no one can be sure if by returning it testifies to a living past or to a living future... Once again, untimeliness and disadjustment of the contemporary.”⁸² It is possible that certain “seismic events come from the future” insofar as “they are given from out of the unstable, chaotic, and dis-located ground of the times.”⁸³ The primordial rebellion of Prometheus and the reign of Atlas are yet to come.

Men “are first of all”, Derrida writes “experiences of time, existences determined by this relation to time which itself would not be possible without surviving and returning, without that being ‘out of joint’ that dislocates the self-presence of the living present and installs thereby the relation to the other.”⁸⁴ “The subject that haunts” does so in a way that one cannot precisely “localize” it or “fix any form” of it, nor can one definitively “decide between hallucination and perception” since “there are only displacements” and “one feels oneself looked at by what one cannot see.”⁸⁵ Derrida is very taken by a passage in Freud’s writings wherein he admits that his research on the death drive, the repetition compulsion, the beyond of the pleasure principle, and so forth, has above all to do with the *es spukt* (“it spooks”) since he has come to recognize it as “the *strongest example* of *Unheimlichkeit*.”⁸⁶ Derrida then goes on to recount how Freud basically admits that he does not begin with this example because it is too terrible or frightful and one scares oneself too much in a way that disturbs one’s capacity to draw analytic distinctions between concepts.⁸⁷ The specter is not an object of knowledge, since objective verification or correspondence of a representation with reality will necessarily remain ignorant of it.⁸⁸ Strictly speaking, the specter is “unreal” but more powerful than any reality; Derrida says of this “hallucination or simulacrum” that it is “more actual than what is so blithely called a living presence.”⁸⁹ The specter abides in that “dark element of a nocturnal obscurity” from out of whose “indetermination” all concepts present themselves on the stage of the intuition.⁹⁰ I intend to show how Prometheus and Atlas are not themselves concepts but specters that are the generative force of the most fundamental concepts and general methods of scientific practice.

Derrida pushes still further in his critical engagement with the occult element in Freud’s thought. He questions whether Freud was right to even consider the “spooky” as

just an example of the uncanny among others, albeit the strongest example, and he asks whether it is not the case that instead, what “spooks” is “the Thing itself, the cause of the very thing one is seeking and that makes one seek? The cause of the knowledge and the search, the motive and the history of the *episteme*?”⁹¹ If *angst* is the most revealing mode of being in the world, then it is the “anxiety in the face of the ghost” that “is properly revolutionary.”⁹² The way in which the spooky disturbs the serene “order of conceptual distinctions” for the researcher ought to also “disturb both the ethics and the politics that follow implicitly or explicitly from that order.”⁹³ The “untimeliness of its present, of its being” or the being “out of joint” of beings within the horizon of time demands that we “introduce haunting into the very construction of... every concept, beginning with the concepts of being and time.”⁹⁴ This, Derrida claims, is the basis of his *hauntology*, against which Ontology is only “a movement of exorcism” and a “conjunction.”⁹⁵

When I evoke Prometheus and Atlas as the spectral essence of technological Science or the specters of technoscience, it might help those familiar with this language to see in them the irreducibly revolutionary specters of a ‘hauntology’ rather than quasi-personified concepts of an Ontology that happens to have political import. In *Specters of Marx* Derrida repeatedly uses the Heideggerian term “technoscience” in connection with the spectral.⁹⁶ He also recognizes that more than ever before, “Religion and Technics” are linked “in a singular configuration.”⁹⁷ Indeed, in remarks that ought to be put side by side with his reference to “a *tekhne telepathike*” in his piece on “Telepathy”, Derrida already knows that there is something spectral about technology as such – beneath, or beyond its manifestation in the form of any particular technologies. He speaks of a “phantomatic mode of production” and goes so far as to claim that there is a “spectral spiritualization that is at work in any *techne*.”⁹⁸ Derrida uses the functional apparatus of “the television of the future” as an analogy to the spectral, remarking that: “All phantoms are projected... on something absent, for the screen itself is phantomatic, as in the television of the future which will have no ‘screenic’ support and will project its images – sometimes synthetic images – directly on the eye, like the sound of the telephone deep in the ear.”⁹⁹ He returns to this analogy in a passage that underlines how both what is projected and the screen that frames this apparition are imaginary – not in the sense of ‘merely fictitious’ but in the sense of the imagistic that exceeds conceptual thought: “The specter is also among other

things, what one imagines, what one thinks one sees and which one projects – on an imaginary screen where there is nothing to see.”¹⁰⁰

Such a spectacle undergoes a reversal of perspective and “(re)pays us a visit” so that: “From the other side of the eye, *visor effect*, it looks at us even before we see it... We feel ourselves observed, sometimes under surveillance by it even before any apparition.”¹⁰¹ As I understand this reversal or inversion, it is that moment at which the technological Science that has been all the while defining itself by the exclusionary exorcism of the spectral is encountered in the guise of a specter – no in the guise of specters, since as Derrida recognizes there are necessarily more than one. This inherent disunity of the specter, the fact that “there is *more than one* of them” and that the spectral always involves the apparition of specters is something that “can never be repeated too often...”¹⁰² The character of these specters, namely Prometheus and Atlas as I intend to portray them, in turn reveal the technological essence of Science – that it is *praxis* through and through and nothing like a mirror of Nature. Consequently, so long as scientific method is understood as thoroughly practical and provisional, nothing precludes the development of “a *tekhne telephathike*”. These specters have, however, hitherto been acting through us only unconsciously. As Derrida observes, the specter, to the extent that it consists in anything, consists in blurring the distinction between possessing and being possessed and dissolving the distinction between capturing it and being captivated by it into a twilight zone of “undiscernability.”¹⁰³ These *revenant* specters under whose observation one finds oneself are also politically portentous: “As in the space of a salon during a spiritualist séance, but sometimes that space is what is called the street, one looks out for one’s goods and furniture, attempting to adjust all of politics to the frightening hypothesis of a visitation.”¹⁰⁴ The specter “upsets all calculations, interests, and capital.”¹⁰⁵

Chapter 6. Prometheus, the Rebel Artisan of Life

Prometheus is he who allows for our functional grasp of the chaotic variability of Nature in terms of calculative variables and analytical propositions. This titan is the aesthetic idea of *techne par excellence*. He is the supreme artisan, so craftily inventive that he engineered our race in his image. After Zeus punished Prometheus, condemning his creatures to a slavish life, the titanic artisan gifts mortals with *techne*. As Aeschylus recounts, it is Prometheus who taught us every art and science – beginning with the use of fire, which is emblematic of the dangerous light of Knowledge. I discuss this fire in terms of an observation that Heidegger makes concerning the atom bomb. Its lightning-flash is emblematic of the essential revelation of technological Science in general: nothing, even the *atom* that was once taken to be paradigmatically indivisible and indestructible, is more fundamental than the defiant hand of the inventive craftsman.

The very name of Prometheus in Greek means “forethought” in the sense of pre-vision and making provision. I suggest that the anticipatory projection of beings in a manner that subjects them to calculative manipulation is an expression of this mythic characteristic of the Prometheus persona. This cunning titan alone is capable of splitting open the fatefully close-knit mind of Zeus and inserting demonic observers into natural processes in a way that allows for a theoretical grasp of them, for example the observers traveling at different speeds that Einstein postulated to elaborate his theory of relativity or those that Heisenberg and other quantum physicists use to grasp the dynamics of indeterminate sub-atomic phenomena such as the inability to measure both the momentum and position of a particle simultaneously.

The mythologist Carl Kerényi did a study of Prometheus as “the archetypal image of human existence.” I draw on his work to show how the archaic Greek notion of the *titanic* is not really that of a class of gods chronologically preceding the Olympians, but is one and the same as the *daemonic* or *gigantic*. It is an image of the god-like potential of mortals, which the god Prometheus fashioned as a race in his image, but which another

power-hungry jealous god sought to impoverish and subjugate. This eternal injustice is the source of the wounded pride and insatiable wrath of *daemonic* individuals, who scheme to defy the minions of the Heavenly Tyrant in their aspiration to reclaim their godlike nature by any means necessary.

One persistent theme in the Prometheus mythos after its Neo-Pagan revival in the Judeo-Christian era is the identification of this Greek divinity with the Latin *Lucifer*, the rebel archangel who leads a “light-bearing” mission to open the eyes of mankind. The Church branded this figure as the *Satan* or “adversary” of the Heavenly Lord and associated him both with the Serpent in the Garden of Eden and the “dragon” of the Apocalypse – the Antichrist whose great sin consists of trying to turn Earth into a paradise that renders Heaven superfluous. I show how Percy Bysshe Shelley, the husband of the author of *Frankenstein*, suggests this equivalence between Prometheus and the Utopian Lucifer in his *Prometheus Bound*.

Elaborating on certain remarks of Kerényi concerning the striking similarity between Prometheus and Christ as images of a suffering savior god, I explain why in the Judeo-Christian era, one must decide between these two figures. They are, in a sense, too close to one another to be compatible. Either Prometheus is the savior of mankind or that distinction belongs to Christ. While I acknowledge that the Gnostic Christ does in some ways come close to being an iteration of the Prometheus persona, the latter’s quintessential faithfulness to the Earth and will to transform *this world* into a Utopia radically breaks with the dualistic Gnostic rejection of this world as a prison crafted by Jehovah and his deceitful archons. Prometheus is the Antichrist insofar as his rebellion against the Heavenly Lord and his servile angels forces him to become what even the Gnostic savior could never be: the world sovereign, his archetypal twin brother, Atlas.

This Luciferian development of Prometheus continues in Mary Shelley’s novel *Frankenstein, or The Modern Prometheus*, which presents the madly inspired scientist qua inventor and explorer as the image of his creator – the rebellious artisan among the titans. Perhaps in part due to its popularization through countless brainlessly bastardized and oversimplified film adaptations, the extent to which *Frankenstein* is a tale concerned with the Promethean spirit of *the creative genius of the scientist in general* has been lost sight of. Shelley’s novel is not only about one particular scientist with a singular mission

to biomechanically engineer a humanoid being, it is about the ethos of exploration and discovery at large. This is why the novel is framed by the imagery of Walton's perilous seafaring into uncharted waters – a theme that resonates very well with the imagery of the Atlantic as it will be explored in connection to the persona of Prometheus' brother, Atlas.

6.1 The Aesthetic Idea of Prometheus

Prometheus is the titan who was punished by Zeus for gifting *techne* to mortals so they would no longer need to cower before his capricious will. It is not an accident that this god who gifts mortals with the power to keep the fire alive throughout the cold darkness is bound to the Caucasus. With their leisurely coordination of routine activities, primitive tribes in parts of the world that do not experience dramatic seasonal shifts are spared from having to experience Time as something that *passes*, something that can be *saved*, or in terms of events that can be *awaited* – they cannot conceive of what it would mean to *be* in a fight against time.¹ Derived from the Greek words *pro* and *manthano*, his name means “forethought” in the sense of pre-vision (prophecy, pre-cognition) and making provision, say, for the winter season. Prometheus is “he who knows in advance.”² The termination *-eus* is characteristic of proper names, and the stem *methe* is related to *mathos* – the root of such words as “mathematics” and “polymath.”³ This clearly connects it to Heidegger's Greek etymology of *mathesis* or *ta mathemata*.⁴ It is the always-already-learnable-in-advance essence of modern science, whereby Nature is seized in terms of the *projection* of mathematical spatio-temporality. The technical device that radically transforms things and places into objects and spaces, allows for the anticipatory determination of beings through axioms.

For Heidegger, what makes modern science fundamentally mathematical is that it strips away from all things and places any essence whatsoever that is unique to them. Ironically, this new and allegedly *factual* science is more abstractly conceptual than its predecessor. Galileo's idea of a body left to itself, which becomes the basis for the Newtonian laws of motion, is just that – an ideal construct. Never is any such absolutely isolated body found in nature, nor can one be created under any practicable experimental conditions.⁵ Yet it is only this kind of conceptualization that allows bodies to be reconceived as masses, places as positions, and motion as the action of a force (another

mass) on a thing so as to divert it (redefine its position) from the straight line it would *ideally* follow were it *left to itself*: "All determinations of bodies have one basic blueprint, according to which the natural process is nothing but the space-time determination of the motion of points of mass... [a] fundamental design... [that] circumscribes its realm as everywhere uniform."⁶ Heidegger explains how this template that is laid over the world is axiomatic, in that it anticipates how all things are experienced and always predetermines their kind of being. *Axiomata* such as Newton's laws of motion, are statements that express this anticipatory determination of beings.⁷

This also abolishes lived distances. In "The Thing", Heidegger claims that Technology's "frantic abolition of all distances brings no nearness; for nearness does not consist in shortness of distance. What is least remote from us in point of distance, by virtue of its picture on film or its sound on the radio, can remain far from us."⁸ He adds: "What is incalculably far from us in point of distance can be near to us. Short distance is not in itself nearness. Nor is great distance remoteness."⁹ Heidegger goes on to claim that the "merging of everything into" what he describes as "uniform distancelessness" is more "unearthly" than the "bursting apart" caused by the atom bomb.¹⁰ Its detonation cannot be more terrifying and unsettling than "the annihilation of the thing" already accomplished.¹¹ Elsewhere, Heidegger describes this as "...the profundity of the world shock that we [should] experience every hour..." we hear radio or watch *tele*-vision [*fern*-seher, or "far-seer"].¹² The reference to the atom bomb is very significant in light of the etymological history of *theoria* that Heidegger traces in "Science and Reflection."¹³ The word "theory" stems from the Greek verb *theorein*, the noun belonging to which is *theoria*; these words involve a conflation of two more basic ones, *thea* and *horao* – which taken together mean "to look attentively on the outward appearance wherein what presences becomes visible and, through such sight – seeing – to linger with it."

Heidegger claims that the old high German word *wara*, which yields *wahr*, *wahren*, and *Wahrheit* (Truth), goes back to the same Indo-European stem as the Greek *horao*, *ora*, *wora*, so that theory – in its original sense – becomes "the *beholding that watches over truth*." Heidegger traces the Roman translation of the Greek *theorein* into *contemplari*, and of *theoria* by *contemplatio*. *Contemplari* means "to partition something off into a separate sector and enclose it therein." It is derived from *templum*, which was

originally the sector carved out of the heavens and the earth "marked out by the path of the sun", and he explains that "within this region diviners make their observations in order to determine the future from the flight, cries, and eating habits of birds." *Templum* is the Latin equivalent of the Greek *temenos*, which means to cut or divide, to partition off, and it is in this sense that *atmeton*, *a-tomon*, the atom, is the uncuttable. So the technology of the atomic bomb is the epitome of the mathematical essence of modern science – it shows that, in the realm of *res extensa*, nothing is indivisible and resistant to further analysis. Even the *atom* can now be taken apart. In "The Age of the World Picture", Heidegger writes: "Within the complex of machinery that is necessary to physics in order to carry out the smashing of the atom lies hidden the whole of physics up to now."¹⁴ The splitting of the atom is a symbol for the triumph of the practical over the metaphysical, the existential over the ideal – the titanic will over heavenly fate. It is as if to say *there is no pre-given fundamental building block* (which is what Democritus wanted the atom to be); rather, *what is fundamental in building is the defiant hand of man*. The atomic flash is the thunderbolt of Zeus stolen by Prometheus.

It is Prometheus who allows us to understand the demonic observers without which anticipation and calculation could not take place in the sciences. Examples of these partial observers include Laplace's "demon" who could potentially calculate the future course of events based on precise knowledge of the totality of a present state of affairs, Maxwell's "demon" capable of distinguishing between slow and rapid molecules in a mixture, and the postulated "observers" of Einstein's theory of relativity or Heisenberg's observers of indeterminate quantum phenomena.¹⁵ A partial observer captures what no one is there to see; qualia would not shine without them.¹⁶ They are points of view projected into things,¹⁷ or forces of a perceptive and experiential nature.¹⁸ One can even see them as Frankensteinian golem installed in the system of reference.¹⁹ These golem are conjured up by the Prometheus persona, forged in the fire stolen from Zeus, and built into nature for the benefit of mankind.

6.2 An Archaic Existential Archetype of the Human Potential

The Hungarian mythologist Carl Kerényi has written a penetrating study of Prometheus as an "archetypal image of human existence."²⁰ As we shall see, the "human"

here refers not to any extant or fixed nature of Man, but to the *human potential* – to the fact that Humanity is uniquely perfectible and self-transcending. Kerényi proposes to interpret Greek myth in such a way as it excavates the foundation of the Greek world, which remains the foundation of our own existence. In his view, many scholars before him have taken an overly literary view of myth. If Greek myths were literary they would deal with more purely human themes. They are, rather, existentially foundational.²¹ Among the Greeks, for whom there was no god so inflated in conception as to be the ‘Creator of the World,’ the act of world founding was the prerogative of poets who ventured to compose *theogonies* or genealogical accounts of the genesis of gods.²² The Greeks did not enjoy a literary type of artistic freedom concerning the subject matter of mythology; they were bound by unwritten laws with regard to the elaboration of this sacred material.²³ The view that classical scholarship takes of myth has been distorted by its origins in the study of literature.²⁴ Rather, the mythos of a people is a primeval reality on which they unconsciously pattern their social organization and which they embody in their ritual and moral actions.²⁵ This implicate order is structured in terms of *archetypal* images, whose iterations in the phenomena of the mundane world are *ectypal*.²⁶ Although he is careful to assert his autonomy from both Jungians and Existentialists, Kerényi is basically interested in a kind of existential phenomenology of these mythic archetypes and their ectypal expressions.²⁷

Among these mythic archetypes interpreted existentially, that of Prometheus is unique in so far as it is the archetype of human existence as such. The fact that Prometheus is *both* the prototype of Man *and* the original Rebel against God who becomes Lord of the Earth, says something profound about the Greek conception of human existence.²⁸ It is in Prometheus above all that we see why Nietzsche is not a revisionist and how the earliest poetic thinkers among the Greeks did indeed herald his existentialist view of life.²⁹ Yet Johann Wolfgang von Goethe preceded Nietzsche in the rediscovery of this proto-existential view of human life. At that point in his development as an artist and scientific thinker when he felt as lonely as a god among men, condemned to an abyss of solitude wherein he was left to establish the foundation for his own existence, Goethe rediscovered the archetype of Prometheus: “I liked in thought to base my whole existence upon it. The conception soon assumed a distinct form, the old

mythological image of Prometheus... who, apart from the gods, peopled a world from his own workshop.”³⁰ One has to be so alone that one needs to create a world in order to have someone to talk to, in order to maintain the will to live. As Kerényi points out, Goethe’s Prometheus not only anticipates Nietzsche’s existentialist view of life – it exceeds it.³¹ Nietzsche’s latent biologicistic materialism prevents him from taking the divinities against which Prometheus rebels seriously enough to understand the gravity of that rebellion, or to fathom the supernatural character of the self-creation of a world from out of the abyss. The Faustian Goethe is still enough of an occultist to do so.

In the sixth Nemean Ode, Pindar expresses the predominant classical Greek view of an eternal and absolute separation between gods and men:

There is one / race of men, one race of gods; both have breath / of life
from a single mother. But sundered power / holds us divided, so that one
side is nothing, while on the / other the brazen sky is established / a sure
citadel forever.”³²

Who then are the Titans, if they are neither gods nor men? Unfortunately, though unsurprisingly given its subject matter, the epic *Titanomachia* about the War of the Titans against the host of the Heavenly Father did not survive the holocaust that classical literature suffered at the hands of Judeo-Christianity.³³ Hesiod tells us that they are *próteroi theoi* or “the earlier gods”, and he bestows them with the epithet *chthónioi* or “subterranean”, presumably on account of their being condemned to the abyssal depths of Tartaros that lie underground, beneath the Earth.³⁴ The Titans are the sons of Heaven who become subterranean as a consequence of the punishment they suffer for waging war against Zeus and his Olympians.³⁵

It is, however, Zeus who plays the role of the usurper here. As Kerényi sees it, the Titans are *próteroi theoi* in the sense of “those who were gods even earlier” than the Olympians led by Zeus, but not in a sequential manner that would allow for another order of divinities to have preceded them as well.³⁶ Titans are those who always already were and are the divinities – the primordial ones, fathered only by *Chronos* or Time. Still, they lie in the terrifying darkness of the underworld (*érebos*), under the *ground* of Being, waiting to violently (*atasthalie*) break forth with that hubris (*hybristes*) and exuberant

vitality (*enorée hypéroplos*) on account of which the fearful and jealous Olympian usurpers bound them.³⁷ They are earlier than human Being, and than the gods that have enslaved Man. Since Man is actually a creature of the Titans, wrought by Prometheus in his own image, the defeat that the Titans suffered at the hands of the Olympians, who go on to mockingly humiliate their creation, provokes unlimited and violent insolence (*hybristes* and *atasthalie*).

Who among them could be more indignant than Prometheus himself, without whose unparalleled cunning Zeus could not have out-schemed and overthrown the Titans, only to see his creation and then himself humiliated by Zeus? In the figure of Prometheus we see a Greek intimation of the truth that Man was destined, by the genuine Creator or Artisan in whose image he was fashioned, to be nothing less than the immortal gods. We were supposed to be a race of new gods. Instead, some young and jealous upstart among the gods decided that we ought to be a slave race kept in subservience to the elements, to disease, and mortal frailty – above all, that we ought to be kept in the darkness of ignorance. Listen to what Hesiod tells us in his *Works and Days*: “For the gods keep hidden from men the means of life. Else you would easily do work enough in a day to supply you for a full year even without working; soon would you put away your rudder over the smoke, and the fields worked by ox and sturdy mule would run to waste. But Zeus in the anger of his heart hid it...”³⁸ Prometheus would not have such treachery from the tyrant who beguiled him with promises of a new world only to misuse his cunning.³⁹ So in defiance of Zeus he gifts Man with the fiery key to the light of knowledge of all the arts and crafts (*techne*). For this Zeus makes provision to punish him in such a way as to afford him something as close to mortal agony as possible for an immortal: although he cannot die of the wounds inflicted on him by the Eagle that feasts on his liver while he is chained to the monolithic pillar of rock with a shaft driven through him, the liver is made to grow back every day so that it can be devoured anew.⁴⁰ Why the liver? The Greeks and other ancient peoples in the time that the archaic mythos of Prometheus arose used this organ in *hepatoscopy*, a practice akin to the tealeaf reading of more contemporary seers. Soothsayers would read the picture of the night’s sky in the dark liver.⁴¹ This relates to the Titan’s defining foresight. The liver was also regarded as the seat of the passions.⁴²

Who then, are the Titans? They are an archetypal projection of all that Man was meant to be, an image of a more-than-human existence that would not be lived in cowering subservience to alien gods – deities that represent Man’s alienation from his own divine heritage and destiny. According to one of the numerous Greek genealogies, Prometheus is the son of a union between Uranos, or “Heaven”, and Gaia, or “Mother Earth.”⁴³ That we were created in his image means that we have within us a pathway to the godly abode. The Titans *qua* “fallen gods” are a mythic projection of the fallenness of our existence. This is not a fallen state of “original sin”; it is an “eternal injury” suffered unjustly.⁴⁴ It should provoke a rebellion, or rekindle one, aimed at our becoming what we really are. From the perspective of the Heavenly Father *or of those who, on Earth and Olympus, submit themselves to His capricious will*, such an insurrection appears to be driven by “mad presumption and exceeding pride.”⁴⁵ The “bottomless pit” to which the Titans are condemned,⁴⁶ is the abyssal underground of an existence whose ground we must lay down or bear up for ourselves. Kerényi writes: “The darkness of Prometheus signifies precisely the deficiency of one who needs fire in order to achieve a more perfect form of being. In obtaining this higher form of being for man, Prometheus shows himself to be man’s double, an eternal image of man’s basically imperfect form of being.”⁴⁷

Prometheus is described as *ankylomêtai* or devious (*ankylos*) in his thinking, and he runs a risk of being caught in his own *ankyle* or “noose”.⁴⁸ A liar and schemer capable of coming up with the cleverest inventions, he is a Trickster whose machinations betray the essential deficiency of the human condition that was modeled on his own nature.⁴⁹ We also see this in his refusal to accept being as it is.⁵⁰ It is Promethean to want to modify the world by crafty inventiveness.⁵¹ In his guise as a Trickster, Prometheus reminds us of Hermes more than of any other Greek god.⁵² The Greek lexicographer Hesychios claims that Prometheus was referred to as *Ithas* or *Ithax*, connoting his status as the messenger or herald of the Titans.⁵³ In other words, he plays the same role for the titans as Hermes or Mercury does for the gods. Like Hermes, he travels back and forth connecting what some would take to be antithetical realms, being the wounded mediator between the Heaven of Olympus and the Underworld of Hades.⁵⁴

Given that he is the prototype of Man, this may symbolize the heavenly heights and hellish depths of our own being. In astronomical terms his position is that of the

Moon, which steals the fire of the Sun and bestows it to the Earth amidst the darkness of night.⁵⁵ He is healed in the night, while the Eagle – who symbolizes the Sun – devours his liver anew each day.⁵⁶ The Moon usually takes a feminine form in the personae of mythological symbolism (Artemis, Diana, Selene, etc.), but it also has at least one masculine embodiment: Prometheus. Or perhaps it is not really a masculine embodiment but another sign of the Trickster’s craftiness: gender-bending and playing the goddess. This happens with Lucifer too, the Latin analog of Prometheus, the Morning Star who is also the goddess Venus (Aphrodite). In her commentary on her husband’s drama, Mary Shelley tells us that according to certain mythological interpretations Asia, the wife of Prometheus, was the same figure as the goddess Venus.⁵⁷ The gender-bending references to Prometheus/Lucifer are brought together in the symbol of the Crescent and Star, which appears on the Magician’s pointed cap. Sometimes Prometheus is depicted wearing the pointed cap of an artist or artisan.⁵⁸ Prometheus is a wonder worker whose amazing inventions astonish the other gods.⁵⁹ Contemplate the connection between the epithet “lunatic” – as in “lunatic fringe” or “mad scientist” – and this lunar Titan, who is driven in his mad inventions by a boundlessly hubristic daring. His crookedness and wounded status correspond most closely to the situation of the new moon, whose sickle is also mythologically associated with the ax that we often see in the hand of Prometheus.⁶⁰

The greatest creation of Prometheus qua arch-Craftsman is the genesis of Man. The archaic Greek tradition is clear – it is Prometheus, not Zeus, who created thinking beings on the Earth. The first men seem to have been of a different constitution than human beings at present. They were made in the image of Prometheus, in other words they were titanic or gigantic. As we shall see more clearly in the next chapter, Plato among other Greeks sometimes refers to these beings as *daemons*, and the *heros* of old are hybrids born of *eros* between them and hominid women. Empedocles also equates the Titans with the *daimones* when he says that these divine spirits guilty of bloodying the Earth in primeval times are damned to wander the Earth for thrice ten thousand years – the standard term of punishment for the Titans.⁶¹ Certain early Greek writers, for example the 6th century BC Orphic theologian Onomakritos, identified Titans with the *Kabeiroi*.⁶²

These were the “first men”, the original inhabitants of the Earth before the present race of mortals, beings who lived in a great city on a remote island and were taken to be

responsible for committing a primordial crime on account of which they were cast into subterranean imprisonment.⁶³ They were associated with the Ocean, were referred to as *Karkinoi* or “Crab-like” people to the extent of sometimes being depicted with crab pincers for hands – suggesting the tongs used by blacksmiths.⁶⁴ It is perhaps noteworthy that in the Indo-European language of Persian that is a cousin to Greek, the word *Kabeir* means “great” in the sense of “titanic” so that if the root is the same the *oi* ending would make the Greek word mean “the titanic ones” (*Kabeiran* in Persian). In the Persian tradition these beings are, however, generally referred to as *Kayâniân* or “the royals” – a possible corruption of *Keyhâniân* or “those who descended from the heavens.” The word *Titan* is of uncertain origin and meaning. The Greeks made up diverse etymologies for it. Two related words are *títax* and *titéne* or “king” and “queen.”⁶⁵ This would make sense if the first rulers of the Earth were the daemonic giants born of the hybridizing of gods and mortals. Mysterious secrecy surrounds these beings in the Greek tradition. Pausanias says that it was not permitted to reveal who the Kabeiroi really were.⁶⁶ Many of the names of the Titans are also listed as names of the Kabeiroi.

The most important of all of these is Prometheus, who was the most revered among the Kabeiroi as a divinity older than Hephaistos and fulfilling what later became his divine function – he practiced the art of the blacksmith and was depicted with a hammer.⁶⁷ Initiates of sanctuaries devoted to the Kabeiroi, where there were smelting furnaces, wore iron rings in imitation of Prometheus.⁶⁸ An ancient Nordic law states that a man is not responsible for what is said in a forge, amidst the virile rhythm of the blacksmith’s work.⁶⁹ Like Hephaistos in later myths, the early myths of the Kabeiroi have Prometheus as a lover pursuing Athena.⁷⁰ In fact, according to these myths, it is Prometheus who split the head of Zeus – with his ax or hammer – so that Athena could be delivered from this proverbial womb.⁷¹ In Greek mythology the mind of Zeus is described as *pykinos* or “close-knit”, meaning that it cannot be breached and nothing escapes it.⁷² This mesh is often equated with the knots of Fate, of which only Zeus has omniscient awareness in a mind that is the mirror of an already completed Being. Thus it is highly significant that Prometheus alone – the god of all crafts that complete uncompleted Being – does manage to break into this mind, so that a goddess of Wisdom and of War could be born from out of it. A Roman sarcophagus relief in Montfaucon

depicts Prometheus, with a basket of clay beside him, forming Man – who receives his soul, in the image of a butterfly, from Minerva.⁷³ The butterfly is a symbol of metamorphosis or transfiguration.

One aspect of the Prometheus tragedies of Aeschylus that is unique in Greek mythology is that it not only shows how the order of Zeus arises, in other words that it has a conditioned genesis, it also suggests that just as the age of Titans was surpassed by that of the Olympians, the later could in the future be surpassed by the founding of a new age and a new world order that begins with the overthrow of the Heavenly Father.⁷⁴ While Aeschylus' lost third tragedy, *Prometheus Lyomenos*, is said to have eliminated this threat through the reconciliation of Prometheus with Zeus, the very idea that such a possibility could have played itself out has been elaborated by others who developed the Prometheus mythos in a more radical direction than the conservative Aeschylus. Still, the kernel is already there in Aeschylus – the germ of the infectious idea that the order of Zeus, while appearing to be that established by an omnipotent being with an omniscient mind, is something so intolerably inhumane and ignoble that any noble soul with a conscience ought to rebel against it – no matter the consequences.⁷⁵ Prometheus is the first and greatest Rebel. The rallying cry: “Give me liberty, or give me death!” really belongs to him, although in the mouth of this immortal it is: “Give me liberty, or something even worse than death!” Prometheus knows that he will be punished terribly for his rebellion, but he goes ahead with it anyway. He thereby sets the standard for an authentic existence chosen in the face – not of death – but of a living hell from which death would be a welcome release.⁷⁶ What a contrast to the happy Olympians who are content to be the pawns of Zeus!

Prometheus Bound begins with *Kratos* or “Force” personified dragging Prometheus off to be bound, with *Bia* or “Violence” silently bearing witness. *Kratos* describes the new order of the world under Zeus and his Olympians thusly: “No one is free but Zeus.”⁷⁷ We are confronted with the reign of an absolute tyrant who is the only one above the unrelenting Law, the *Nomos*, through which he enslaves others. The oppression is appalling. Through the mouth of Hephaistos, Aeschylus describes the torment of Prometheus as *théama dysthéaton*, a “sight that can scarcely be borne” and that “eyes should not look upon.”⁷⁸ Yet Prometheus wants it to be seen. Instead of calling

upon God to bear witness to this injustice, since God is here the very source of injustice, Prometheus calls upon the elements of Nature to testify to his ordeal:

O air of heaven and swift-winged winds, / O running river waters, / O never-numbered laughter of sea waves, / Earth, mother of all, Eye of the sun, all seeing, / on you I call. / Behold what I, a god, endure from gods. / See... I summon you as witness.⁷⁹

In the last scene, when he is struck down by Zeus' thunderbolt and plunges into Tartaros, Prometheus cries out: "Oh holy Mother Earth, O air and sun, / behold me. I am *wronged*."⁸⁰ Prometheus seems to particularly bemoan the humiliating disgrace of his punishment; he repeatedly describes it as shameful:

See in what shameful tortures I must struggle / through countless years of time. // This shame, these bonds, are put upon me / by the new ruler of the gods."⁸¹

He has been dishonored – because he honored lowly mortals, against the wishes of Zeus.

As Aeschylus relates through the mouthpiece of Hephaistos at the outset of *Prometheus Bound*, the chief crime of Prometheus is that he "gave to mortals honor in excess of justice."⁸² Later Prometheus puts this into his own words: "Look at me then, in chains, a god who failed, / the enemy of Zeus, whom all gods hate, / all that go in and out of Zeus' hall. / The reason is that I loved men too well."⁸³ The *péra dikes* or "in excess of justice" that is referred to in the first of these two quotes is a key to the Titanic mentality in general. Of course, the so-called "justice" referred to here is simply the *nomos* of Zeus. The crime of Prometheus is that he put a very insidious idea in the human mind, one that over time would make at least some people simply incapable of submission to arbitrary force, the idea that Justice is not the will of the strongest – even if the strongest in question is God Himself.⁸⁴ Prometheus conceived an ideal order of Justice; his rebellion is based on the creative imagination of a world other than the real one, as symbolized by his prophetic vision of a future wherein Zeus is overthrown. His devious foreknowledge of Things To Come exceeds even that of Zeus.⁸⁵ He harbors this secret as the source of his only hope.⁸⁶ So far as we can tell, the Greek conception of *utopia* begins in the

archaic Prometheus mythos. This is fitting since the titan responsible for *techne* would then be the godfather of science fiction.

Utopia can only be born out of a moment of total disenchantment and contempt for petty comforts that help one to live in an altogether unacceptable world: “To speak is pain, but silence too is pain, / and everywhere is wretchedness.”⁸⁷ This moment of insight into the all-pervasive suffering of life is akin to the insight of the Buddha – not only when he arrives at the conclusion that “life *is* suffering” but also when, in somewhat more Promethean terms, he asks us: “How can there be laughter, how can there be pleasure, when the whole world is burning? When you are in deep darkness, will you not ask for a lamp?”⁸⁸ Except that the response of the creative spirit of Prometheus is almost diametrically opposite to the stoicism of Siddhartha: not to transcend suffering by “snuffing out” the passions – for *Nirvana* literally means to “snuff out” – but to fight fire with fire by kindling an immeasurably passionate revolt against ‘reality.’ *Man deserves better than this...* that incendiary forethought is the gift of the light-bearer, the first artist.

6.3 Prometheus or Christ: Who is the Savior of Mankind?

Of all the divinities of the pagan world, Prometheus is the *one* that most precisely prefigures Christ. It is how close they are that reifies the fundamental difference between them and forces one to choose either the one or the other. Prometheus is not just some pagan deity that could potentially be appropriated into a syncretistic Judeo-Christian faith. He is, in the strictest sense, the Anti-Christ. Prometheus is the only other god who comes down to Earth as a savior and suffers the torturous pain that human beings suffer in a punishment for his will to act as the benefactor of mankind.⁸⁹ Except Prometheus is not martyred by men who he has come to liberate. It is God, the Heavenly Father, who punishes him for wanting to help mortals become something other than His slaves. Prometheus is not an emissary of the Heavenly Father who is merely *playing at being a vulnerable human*, and who eschews violent resistance only because at any time he could call upon legions of heavenly angels to fight for him. Prometheus is a Rebel who makes common cause with mortals when he defies a most-high God tyrannizing over them, and then suffers the worst kind of torturous injustice that mortals are subjected to *despite being an immortal god himself*.⁹⁰ Prometheus must bear the bodily pain of a human

being, but without being delivered from extreme suffering by that grace which uniquely belongs to mortals: death.⁹¹ Like so much else about Prometheus, this defies the dichotomy between man and god.⁹² He is a fallen god exiled from Heaven into the pit of a humiliating torment that is more-than-human, on account of an intercession motivated by compassion for what humans suffer at the hands of God's jealousy.

The image of Christ as the martyred savior is a much more ambiguous one. The Gospels present us with a terribly conflicted picture of this putative Savior. Contemporary biblical scholars such as Elaine Pagels, Marvin Meyer, Bart Ehrmann, Burton Mack and the fellows of the Jesus Seminar, have found that the gospels were written based on various collections of the sayings of Jesus that originally included no contextual narrative of events surrounding any given saying.⁹³ Tens of gospels that fundamentally contradict each other were written and only four were chosen as "orthodox" at the Council of Nicea in 325 AD – for two main reasons: 1) they most suited the political purposes of the Roman Empire; 2) they more or less agreed with each other compared to the many divergences of the other gospels.⁹⁴ Yet a close reading of the gospels of the *New Testament* will reveal that even this *attempt* at orthodoxy, *almost three hundred years after the time of Jesus*, fails to deliver anything near a coherent picture of the message of the alleged Messiah.⁹⁵

We have one Jesus that is a zealous (perhaps Essene) Jewish rabbi whose only concern is for "the children of Israel", who is taken to be a Jewish King in the royal Davidic line, and who opposes the Pharisees in Jerusalem only because they have departed from the orthodox faith by ingratiating themselves to the pagan Roman occupiers. There are many passages in the Gospels of the *New Testament* that paint this general picture of Jesus. This Jesus tells people not to praise him, but to know that there is one God, and He alone is 'good' and worthy of worship (Matthew 19:16). He also repeats the first of the Ten Commandments to this effect (Mark 12:28). We hear Jesus tell people not to fear their adversaries, who can only kill their bodies, but to fear God who can send both their bodies and souls to burn in Hell (Matthew 10:28). People are also warned to perpetually be on guard, in fear and hope, for the coming Day of Judgment, which will arrive when they are least expecting it (Matthew 24:42-51). On that day when the angels descend from heaven to reap the harvest of men and their deeds (Matthew

13:34-43), everyone will be held accountable for every word they have ever spoken (Matthew 12:36), and every person will be rewarded with heaven or punished with misery in hellfire according to their own actions (Matthew 16:27; 13: 47-50).

The same Jesus says that he has come to confirm that preached by the prophets before him and to fulfill the law of the *Torah*, which law he claims will be valid in its every injunction until the end of the world (Matthew 4:4; 5:17-18). He describes following the law as the 'straight path' and suggests that all others stray towards destruction. (Matthew 7:12-14) However, he demands that the spirit of the law be obeyed and not merely the letter of the law (Matthew 15:7-8, 21-22, 27-32). One's righteousness must be more profound than that of the religious lawyers (5:20). For one who observes the spirit of the law, certain infractions are forgiven such as eating what is unclean or healing on the Sabbath.

This Jesus acknowledges himself to be a messenger sent to a specific community, the Israelites. (Matthew 15:22-28) He is intended to redeem them but in the end he accuses the Jews, and especially their religious leaders, of having forsaken their covenant with the Lord. They have perverted the law that was given to them. As a consequence, says Jesus, His kingdom will be taken away from them, 'the chosen people', and instead whoever from whatever nation who is faithful shall join the prophets in dwelling there. (Matthew 8: 8,10-12) Jesus uses a miraculous power given to him by God in order to heal the sick, lame and possessed and even to raise people from the dead. (Matthew 10:1, 5-8; Mark 5:35-43) Especially in light of these miraculous signs having been shown to them, those who witness Jesus' ministry and do not repent are cursed by him (Matthew 12:34; 17:17). He damns town after town that rejects his message and that of his apostles to a terrible judgment from God, destruction worse than that of Sodom and Gammorah (Matthew 10:15; 11:23-24).

Then, in the very same canonical Gospels, we have another Jesus – the Gnostic philosopher – who believes that the Jewish creator god is the Devil and arch-deceiver, whose doctrine represents a synthesis of pagan mystical philosophies such as Hermeticism and Pythagoreanism, and who is here to abolish organized religion and free the spirits of the elect from the material world of pain and power. This last Jesus was that worshipped by the Gnostics of Alexandria, whose scriptures were consigned to flames

after the Council of Nicea and only rediscovered in a cave in Nag Hammadi Egypt in 1945.⁹⁶ Some of them, such as *The Gospel of Thomas*, are as old or older than the gospels of the *New Testament*. Despite this initial attempt at suppression, the anti-Jewish Gnostic Jesus was also worshipped by the Bogomils of Southeastern Europe and the Cathars of southern France – so that the Catholic Church *first invented* the institution of the Holy Inquisition in order to exterminate them and only later applied it to Jews, Muslims, and Protestants.⁹⁷ If we read the Gospels with a view to the teaching of Jesus on certain key issues such as Justice, Property, the role of Women, the Family, and the meaning of Worship, we see that there is at least one very clearly discernable strata in the text that expresses a Gnostic revolt against every major tenant of Judaism.

The *Gnostic version of Christ* could perhaps be seen as an iteration of the Prometheus archetype⁹⁸ if it were not for the fact that Prometheus is the savior of *this* world and remains faithful to his Mother Earth. In *Prometheus Bound*, Aeschylus gives *Themis* as the name of Prometheus' mother, which Kerényi takes to be identical with *Gaia* or the Great Mother goddess: Earth.⁹⁹ In the Heidelberg fragment of one of Aeschylus' other lost Prometheus plays, the Titan places himself under the protection of *Ga mater* or Mother Earth.¹⁰⁰ Prometheus is the reverent son of his Mother Earth, on whom he frequently calls, and who bestowed him with the gift of prophecy that was exercised by wise women at the Oracles of the archaic Greek world – such as the one in Delphi.¹⁰¹ *Ga mater*, “Mother Earth” or *Chthon*, as she is sometimes called, is the source of Prometheus' subterranean strength and he remains faithful to her.¹⁰² Zeus is quite decidedly God *the Father*. He ushers in an era and a world order wherein patriarchs are the unquestionable rulers and lawgivers, both in private and public.¹⁰³ In Aeschylus' *Prometheus Bound*, the defenseless Io who is turned into a heifer and forced to wander the Earth is emblematic of womanhood in general under the new order.¹⁰⁴ Zeus is, however, subordinate to what will ripen in time and spell his doom.¹⁰⁵ Prometheus' prophetic vision of a more just world is rooted in the maternal principle, which protects the perpetual becoming of all beings – their continued growth and bearing fruit.¹⁰⁶ Mother Earth has intimate ties with Prometheus that she does not share with Zeus.¹⁰⁷

Goethe retains this maternal tie between Prometheus and the homeland of Earth in his poem when, condescendingly addressing Zeus, the fire-bringer says:

Cover your heavens, O Zeus, / With cloudy mist / And like a little boy / Cutting the heads off thistles, / Practice your hand / On oak trees and mountain peaks; / But you will have to let / My earth stand / And my hut that you did not build, / And my hearth / For whose fire / You envy me.”¹⁰⁸

The life-affirming spirit that proscribes even the Gnostic Christ from being an iteration of Prometheus can also be seen in these lines of Goethe’s poem: “Do you suppose / I should hate life, / Flee to the desert / Because not all / My dream flowers bore fruit?”¹⁰⁹ Jesus did, of course, “flee to the desert” – setting an example for so many of his monastic followers. Moreover, in order to save the Earth, Prometheus must become what a savior of Gnostic dualists could never become, because they view the Earth as nothing but a prison planet and oppose the exercise of power *in principle*. In Goethe’s dramatic fragment, Epimetheus says to Prometheus: “[you] shall live / And rule the earth.”¹¹⁰ He must become the ruler who usurps the sovereign power of God in this world and reigns as king over the kings of Earth. This is already Prometheus qua Lucifer.

This post-Christian and anti-Christian aspect of Prometheus comes to the fore in the drama *Prometheus Unbound* by Percy Bysshe Shelley. There are two key innovations in Percy Shelley’s rendition of the Prometheus mythos, both of which I would like to affirm and adopt. The first is that Shelley radicalizes the revolutionary potential of the rebellion of Prometheus against the heavenly tyranny of Zeus. As in the case of Aeschylus and Goethe, Prometheus is betrayed by Zeus after helping him to become the Sovereign only to show his true colors as a far more tyrannous ruler than Chronos or Saturn. Shelley also follows Aeschylus and Goethe in having Prometheus harbor a precognitive foresight of the demise of Jupiter at the hands of a son more powerful than him. Mercury (Hermes) keeps trying to coerce Prometheus to confess the secret, but in Shelley’s version Prometheus never capitulates. In the traditional mythos, Prometheus finally reveals to Jove that his marriage to Thetis will yield the heir that usurps his throne, so that Thetis can be married to Peleus instead – thus the soul that would have unseated the heavenly tyrant if it were born as a god is in fact born as the hero Achilles. Shelley has Prometheus endure in his torture until this marriage that spells Jove’s doom comes to

pass, at which point the heavenly tyrant who lives off the blood sacrifices of mankind is overthrown and humanity is liberated in a new world order more benevolent than that of both Jupiter and Saturn before him.

The moral here is uncompromisingly progressive and at least tacitly anti-Christian. While there are Gnostic elements to it, Shelley's Prometheus is far more worldly than the Savior of Gnosticism. In his drama, Shelley often uses the Latin equivalents of the Greek names of divinities: Saturn instead of Chronos, Jupiter or Jove instead of Zeus, and Mercury instead of Hermes. The one significant case where he does not do so is that of Prometheus himself, because the Latin equivalent of Prometheus would be Lucifer: the light-bearer. Shelley's Prometheus bears all the marks of Lucifer. He rebels against Jove or Jehovah as against a heavenly tyrant who has compelled not only the subservient worship of mankind but also what Prometheus takes to be the despicably servile obedience of the other gods or angels in Heaven. Like the archetypal Serpent at the Tree of Knowledge, by teaching mortals all the arts and sciences he defies the other gods and their chief who want to keep human beings ignorant. Among these crafts, Shelley explicitly names: metallurgy, mining, rhetoric, Science, poetry, sculpture, medicine, astronomy, and navigation of the oceans.¹¹¹ Shelley refers to the will and power to remake the world by means of such crafts as *Promethean*:

And our singing shall build / In the void's loose field / A world for the
Spirit of Wisdom to wield; / We will take our plan / From the new world
of man, / And our work shall be called the Promethean."¹¹²

At its core lies the basically anti-Christian idea that Man ought to become the fulfillment of his own highest hopes, rather than await their fulfillment by a divine power that manipulates our hopes and fears to keep us submissive. There is an implication that during the reign of Saturn we lived in blissful ignorance, and then during the reign of Jupiter under enforced ignorance. The will of this *unbound* Prometheus is neither to bargain his way towards helping the heavenly tyrant to maintain the enforced ignorance nor to overthrow him so that we can return to blissful ignorance, but to push Man forwards towards enlightenment and liberation through the perfection of the Wisdom and Knowledge that he has, already, irrevocably attained.¹¹³

Percy Shelley's adaptation of the Prometheus mythos also heralds the turn it takes towards science fiction in Mary's novel. Although his drama stays within broad conventions of the romantic literature of his epoch, it is informed by a modern scientific grasp of the Cosmos. The dimensions of the tragedy have been dramatically expanded in space and time. Shelley talks about cosmic kingdoms ruled over by star gods in the vastness of space beyond the constellations visible to us. He also sheds light on abyssal depths of the Ocean, which conceal the ruin of an antediluvian civilization whose population "was mortal but not human."¹¹⁴ Two luminous craft emerge from out of a forest and plunge into the sea to reveal ruins of this civilization – its architecture and engineering, its conveyances, and monuments – which are littered with the remains of gigantic prehistoric beasts, some winged and others sea-creatures with shining scales.¹¹⁵

Shelley describes the "interlunar" aerial "chariots" that enter the ocean in terms that cross the border from the literary conventions of Fairy lore to those characteristic of the airships and flying saucers of science fiction. Moreover, Shelley's heading to Scene 3.2 leaves no doubt that the ruined civilization strewn in the abyssal depths of the Ocean is Atlantis.¹¹⁶ At one point, he describes Zeus' destruction of the Atlanteans by means of earthquakes and a worldwide deluge. In light of what we learned from Kerényi concerning the meaning of the *titanic* and Prometheus as the father of the "first men", the "mortal but not human" race that perished in this flood together with their considerable knowledge might be seen as the first children of Prometheus, and Zeus' destruction of them as a punishment of the rebel who tried to craft, in the form of this antediluvian civilization, a hearth for the heavenly light on Earth. Shelley raises Prometheus' mother, Earth, to unprecedented heights in this drama.¹¹⁷ The aim of the Promethean revolt is to liberate the Earth from Heavenly oppression by turning it into a self-sufficient paradise very different from Eden with its ignorant bliss, an earthly Utopia wrought by the human race through the Promethean gift of crafts employing Wisdom and Knowledge – including, very significantly "arts, though unimagined, yet to be."¹¹⁸ With such *techne* we will "build a new earth and sea, And a heaven where yet heaven could never be."¹¹⁹

6.4 Frankenstein, or Prometheus as the Artisan of Life

The analogizing of Prometheus to Lucifer that we see to some extent in Percy Shelley's work is further elaborated in Mary Shelly's novel *Frankenstein, or the Modern Prometheus*. The metaphor that the creature most often uses to draw an analogy between his extraordinary condition and that of some other being is the metaphor of Lucifer in John Milton's *Paradise Lost*. Here is the first instance in which Frankenstein's monster compares himself to the fallen angel: "Remember, that I am thy creature; I ought to be thy Adam, but I am rather the fallen angel, whom thou drivest from joy for no misdeed."¹²⁰ These analogies are explained by the fact that the creature claims to have early on come into possession of several books on the basis of which he improved his language skills and that among these was *Paradise Lost*.¹²¹ In fact, he tells us that it was the one book among the three that "excited different and far deeper emotions."¹²² He narrates how he was struck by the similarity between his own state of affairs and that depicted in this great work.¹²³

The creature tells us that these feelings were further confirmed by having discovered Doctor Frankenstein's experimental journal in the pocket of the coat that he ran off with from the laboratory. This journal, which casually intermingled "accounts of domestic occurrences" with a detailed report of the process of the creature's genesis, drives home that he is the infernal creation of a demiurge.¹²⁴ Like Satan he vows "eternal hatred and vengeance" in recompense for the cruelty of his creator, but he sees himself as even more accursed than Satan since the rebel angel at least "had his companions, fellow-devils, to admire and encourage him."¹²⁵ The Satanic or Titanic righteous indignation turned to insatiable wrath continually resurfaces as the driving force of the creature's misdeeds.¹²⁶ He wants his Creator to fashion an Eve to be his companion and assuage the burning passion that drives him through the icy mountains.¹²⁷ After he watches Frankenstein destroy this future mate, the creature says: "Evil thenceforth become my good... the fallen angel becomes a malignant devil. Yet even that enemy of God and man had friends and associates in his desolation; I am alone."¹²⁸ The monster's intellect matches his superhuman strength and agility; he is so brilliantly crafty that sometimes it seems "as if [he is] possessed of magic powers."¹²⁹ Frankenstein's cautionary

descriptions of the creature's dialectical also eloquence call to mind a comparison to silver-tongued Lucifer.¹³⁰ Indeed, Frankenstein compares himself to Lucifer as well:

When younger... I believed myself destined for some great enterprise... When I reflected on the work I had completed, no less a one than the creation of a sensitive and rational animal, I could not rank myself with the herd of common projectors. But this thought, which supported me in the commencement of my career, now serves only to plunge me lower in the dust. All my speculations and hopes are as nothing; and, like the archangel who aspired to omnipotence, I am chained in an eternal hell... a high destiny seemed to bear me on, until I fell, never, never again to rise.¹³¹

The novel explores the terribly complex moral dilemma of creating “a thinking and reasoning animal.”¹³² Shelley reaches back to the most archaic Greek strata of the Prometheus mythos, wherein the Titan is the father of a race of *daemons* or giants. Frankenstein decides that in his “creation of a human being” he should work on a gigantic scale, so that the minuteness of the organic mechanisms that he has to manipulate should not pose so great a difficulty as they would with a body of ordinary size; the creature is to be “about eight feet in height, and proportionately large.”¹³³ This gigantic stature is first illumined by a flash of lightning amidst a tempest in the Swiss alps.¹³⁴ The creature is consistently referred to as a “daemon” and described as “demoniacal.”¹³⁵ This being is just as often explicitly contrasted with the “human” and “humanity.”¹³⁶ The creature moves with an elusive agility comparable to bolts of lightning; shooting at him is like firing on a ghost; consequently, others may take the thing to be a conjured hallucination – as the townspeople do when their massive manhunt comes to naught.¹³⁷ As he moves with “more than mortal speed” his “ghastly and distorted shape” is barely discernable in the moonlight.¹³⁸ When someone does catch sight of the creature, his countenance is so “unearthly” that it is “scarring” to the beholder.¹³⁹ The peasants that encounter him in “the wilds of Tartary and Russia” react to him as to a “horrid apparition” rather than to a purely physical being.¹⁴⁰

At times, Frankenstein views this monster as a projection of something inhuman within his own psyche: “I considered the being whom I had cast among mankind, and endowed with the will and power to effect purposes of horror, such as the deed which he

had now done, nearly in the light of my own vampire, my own spirit let loose from the grave, and forced to destroy all that was dear to me.”¹⁴¹ We also see this after his destruction of the second creature, intended to be the mate of the first, when Frankenstein feels as if he no longer belongs to a race of human beings like himself and wanders the secluded island “like a restless specter, separated from all it loved, and miserable in the separation.”¹⁴² He seems to have been under a daemonic inspiration during the creation of the titanic being, perhaps the possession of the daemonic soul seeking for him to grant it embodiment: “I remembered, shuddering, the mad enthusiasm that hurried me on to the creation of my hideous enemy, and I called to mind the night in which he first lived.”¹⁴³ At one point Frankenstein even speaks of the creature as “the monstrous Image” whose existence he has endured.¹⁴⁴ While at times he depicts the creature – and himself – in these spectrally superhuman terms, at others he portrays it as an animal: “Besides, the strange nature of the animal would elude all pursuit... Who could arrest a creature capable of scaling the overhanging sides of Mont Salêve?”¹⁴⁵ Still, it is a superhuman animal who “bounded over the crevices in the ice” with “superhuman speed” and whose “stature... seemed to exceed that of a man.”¹⁴⁶ Sometimes it seems that the stature of the creature is a metaphor for the gigantism of the creator’s project. Frankenstein is not averse to undertakings of titanic scale: “Nor could I consider the magnitude and complexity of my plan as any argument of its impracticability.”¹⁴⁷

Like Prometheus bound or Lucifer looking heavenwards from the pit of Hell, Frankenstein does his work in extreme, even inhuman, solitude. He is haunted by the sense that he has committed some tremendous crime, and he relates this to his reclusiveness – as if he would see his own guilt reflected in the eyes of those who would be his fellow men if he had not opened a chasm between them and himself.¹⁴⁸ Frankenstein establishes his laboratory in a secret cell at the top of the house in which he resides, separated from all of its other apartments by a gallery and a staircase, and therein he becomes insensitive to the passing of the seasons, the ordinary passions, and the companionship of even those he once took to be his closest friends.¹⁴⁹ If it were not for his superhuman singularity of purpose, he would succumb wholly to his increasing disintegration as a human being.¹⁵⁰ The deserted rocky outcrop of an island, amidst rough

waters, in the northern highlands of Scotland is an even more reclusive location for his second attempt to craft a superhuman being to be the mate of his first creature.¹⁵¹

Frankenstein's solitude is a mirror of that which characterizes the places most fit as a habitation for the daemonic race that he designs. The novel features repeated references to South America in connection to the superhuman being created by Frankenstein. In the first of these the good doctor exclaims: "I would have made a pilgrimage to the highest peak of the Andes, could I, when there, have precipitated him to their base."¹⁵² Later on the creature promises Frankenstein that if he consents to craft a mate for him: "...neither you nor any other human being shall ever see us again: I will go to the vast wilds of South America... I swear to you, by the earth which I inhabit, and by you that made me, that with the companion you bestow I will quit the neighborhood of man, and dwell, as it may chance, in the most savage places."¹⁵³ Frankenstein thinks to himself that: "Even if they were to leave Europe, and inhabit the deserts of the new world, yet one of the first results of those sympathies for which the daemon thirsted would be children, and a race of devils would be propagated upon the earth, who might make the very existence of the species of man a condition precarious and full of terror."¹⁵⁴ It is in fear of this genesis of an entire race of daemonic beings that the good doctor tears apart his second creature to the horror of the first, whose moonlit face watches Frankenstein through the window of his laboratory.

Frankenstein associates the mountains not only with his own gigantic creature, but with a superhuman race of beings in general: "...the mighty Alps, whose white and shining pyramids and domes towered above all, as belonging to another earth, the habitations of another race of beings."¹⁵⁵ Later recounting the happy villagers along the Rhine river, Frankenstein remarks: "Oh, surely the spirit that inhabits and guards this place has a soul more in harmony with man than those who pile the glacier, or retire to the inaccessible peaks of the mountains of our own country."¹⁵⁶ The daemonic being makes his home where men can barely survive, so that he may be sheltered from the multitude who would seek out and destroy him if they openly knew of his superhuman existence.¹⁵⁷ After the death of Frankenstein, the creature resolves to continue his trek to the North Pole where, amidst the iciest clime of the Earth he will set up a funeral pyre in which to immolate himself so that the "light of that conflagration" consumes all the

evidence that would allow anyone to emulate Frankenstein in his “unhallowed” creative arts; the fire will be a beacon that reminds man of the fatality of the Promethean quest.¹⁵⁸

One aspect of the novel that the subsequent film adaptations have often covered over is the fact that, although the novel is set at the zenith of the Age of Reason, Frankenstein is not your ordinary materialistic scientist. He is an occultist, an alchemist. Frankenstein refuses to share with Walton, or with anyone else for that matter, “the particulars of his creature’s formation.”¹⁵⁹ Once, when Walton presses him only to find that “on this point he was impenetrable”, Frankenstein chastises him in a particularly revealing manner: “Are you mad, my friend? ...or whither does your senseless curiosity lead you? Would you also create for yourself and the world a demoniacal enemy?”¹⁶⁰ Yet it is clear enough from other clues that Shelley leaves us that the process cannot have been one in conformity with the orthodox mechanistic theories that were becoming predominant at just the historical period when the novel is set.

Frankenstein first describes his tale to Walton as one that is “supernatural” not in the sense of supra-natural, but insofar as it exposes the excessively irrational in Nature that cannot be encompassed or controlled in its becoming – wonders, marvels, prodigies – quite literally, the incomprehensible in Nature:

Prepare to hear of occurrences which are usually deemed marvelous. Were we among the tamer scenes of nature, I might fear to encounter your unbelief, perhaps your ridicule; but many things will appear possible in these wild and mysterious regions, which would provoke the laughter of those unacquainted with the ever-varied powers of nature; – nor can I doubt but that my tale conveys in its series internal evidence of the truth of the events of which it is composed.¹⁶¹

From early on in his youth, Frankenstein saw the world as “a secret which [he] desired to divine”; he had an insatiable curiosity to discover “the hidden laws of nature” and the pursuit of these discoveries filled him with a sense of “rapture.”¹⁶²

This is not the only time that he speaks of scientific discovery in ecstatically religious terms. In another passage of this kind Frankenstein makes an interesting equivocation between metaphysics and the physical in its highest sense – calling to mind Schelling’s view of the ‘supernatural’ as natural but as the most deeply hidden irrational

element of Nature: “It was the secrets of heaven and earth that I desired to learn; and whether it was the outward substance of things, or the inner spirit of nature and the mysterious soul of man that occupied me, still my enquiries were directed to the metaphysical, or in its highest sense, the physical secrets of the world.”¹⁶³ That by “metaphysical” here he does not mean academic ‘metaphysics’ but the understanding of occult power is made clear within short order, when Frankenstein goes on to volunteer the fact that he spent years procuring and studying the complete works of Cornelius Agrippa, Paracelsus, and Albertus Magnus.¹⁶⁴

Modern natural philosophy, in other words Neo-Cartesian materialism, always left him “discontented and unsatisfied.”¹⁶⁵ He specifically attributes this to its failure to understand anything except in terms of efficient causality, which is in effect to understand nothing at all. It is formative and final causes that explain the world. By contrast, this is what he says concerning the three great Western alchemists mentioned above: “But here were books, and here were men who had penetrated deeper and knew more... I became their disciple.”¹⁶⁶ He acknowledges that some would – albeit erroneously – see this discipleship as an atavism in the rationalistic 18th century, a throwback to the occultism of natural philosophy during the Renaissance. His pursuit is one and the same as that of the occult natural philosophers of that epoch, who drew no distinction between Science and Spirituality, and who were consequently persecuted and martyred by the Catholic Church:

Under the guidance of my new preceptors, I entered with the greatest diligence into the search of the philosopher’s stone and the elixir of life; but the latter soon obtained my undivided attention. Wealth was an inferior object; but what glory would attend the discovery, if I could banish disease from the human frame and render man invulnerable to any but a violent death! Nor were these my only visions. The raising of ghosts or devils was a promise liberally accorded by my favorite authors, the fulfillment of which I most eagerly sought...¹⁶⁷

Doctor Frankenstein is also a Renaissance man in that he understands that if one is to be a “scientist”, rather than a “petty experimentalist”, one has to pursue a wide range of inter-disciplinary studies.¹⁶⁸ This citizen of the world – who we can well imagine in Ptolemaic Alexandria or Medici Italy – considers it a mere diversion from his work to

study Persian, Arabic, and Sanskrit, just to be able to appreciate their marvelous (and then largely un-translated) literatures.¹⁶⁹ Walton's descriptions of the mad scientist leave us with no doubt that the man radiates genius and is not only a nobleman by birth, but a spiritual aristocrat: "Sometimes I have endeavored to discover what quality it is which he possesses, that elevates him so immeasurably above any other person I ever knew. I believe it to be an intuitive discernment; a quick but never-failing power of judgment; a penetration into the causes of things, unequalled for clearness and precision..."¹⁷⁰

When young Frankenstein finally begins to formally study natural science at the University of Ingolstadt, the response of one of his 18th century professors to the subject matter of his hitherto self-directed studies is no different than it would be today: "Have you... really spent your time in studying such nonsense?"¹⁷¹ We must remember that, as Frankenstein tells us in the very first line of his narrative, he was born and raised in Geneva, a progressive center of high culture, in order to appreciate the irony when Professor Krempe goes on to add: "In what desert land have you lived, where no one was kind enough to inform you that these fancies which you have so greedily imbibed are a thousand years old and as musty as they are ancient? I little expected, in this enlightened and scientific age, to find a disciple of Albertus Magnus and Paracelsus."¹⁷² As he begins a new, orthodox course of scientific study, Frankenstein goes so far as to say that he has "contempt for the uses of modern natural philosophy." He observes that: "It was very different, when the masters of science sought immortality and power... but now the scene was changed. The ambition of the enquirer seemed to limit itself to the annihilation of those visions on which my interest in science was chiefly founded."¹⁷³ Still, "the soul of Frankenstein" remains determined to "pioneer a new way, explore unknown powers, and unfold to the world the deepest mysteries of creation."¹⁷⁴

It is clear to Frankenstein that he is a man with a destiny – a fatality that pursues him and that will not allow him to succumb to death until it has been fulfilled.¹⁷⁵ Like Prometheus, he has been driven to a longing for death as a release from a life that is worse than death, and since the mad scientist knows that no mortal death is capable of delivering him from his destiny, this longing takes an increasingly apocalyptic form: "I often sat for hours motionless and speechless, wishing for some mighty revolution that might bury me and my destroyer in its ruins."¹⁷⁶ After he has witnessed the strangled

body of Elizabeth, he adds: “Could I behold this, and live? Alas! Life is obstinate, and clings closest where it is most hated.”¹⁷⁷ The creature does not primarily aim at physically killing Frankenstein. What he wants above all is to torture the creator’s soul and bring it to the point of despair. Only then will he have permission to die: “I will work at your destruction, nor finish until I desolate your heart, so that you shall curse the hour of your birth.”¹⁷⁸ Frankenstein is horrified by his own resilience as compared to lovers who suffer tragedies and go, sometimes in the space of a couple of days, from being in the prime of their life to rotting in the grave: “Of what materials was I made, that I could thus resist so many shocks, which, like the turning of the wheel, continually renewed the torture?”¹⁷⁹ His life becomes so traumatic that he loses his sense of reality and lives waiting to wake up from a nightmare: “The whole series of my life appeared to me as a dream; I sometimes doubted if indeed it were all true, for it never presented itself to my mind with the force of reality.”¹⁸⁰

Walton’s preface establishes him as an explorer whose life is dedicated to scientific discovery. He is not just concerned with opening a much shorter passage from Europe to the Pacific through the North Pole, but he hopes to find the magnetic north pole and to thereby improve the consistency of celestial observations. We are told that he has studied diverse sciences, from mathematics to medicine and “those branches of physical science from which a naval adventure might derive the greatest practical advantage.”¹⁸¹ In this man we see the qualities of a Galileo and a Columbus combined. He is like those early scientific experimenters who risked their own lives in order to do battle with and bend the elements of Nature that constrain human enterprise: “One man’s life or death were but a small price to pay for the acquirement of the knowledge which I sought for the dominion I should acquire and transmit over the elemental foes of our race.”¹⁸² When Frankenstein hears Walton speak in these terms, he cannot stop himself from bursting out with this reply: “Unhappy man! Do you share my madness? Have you drunk also of the intoxicating draught? Hear me – let me reveal my tale, and you will dash the cup from your lips!”¹⁸³ Later, Frankenstein evokes the image of the Serpent at the Tree of Knowledge when he adds: “You seek for knowledge and wisdom, as I once did; and I ardently hope that the gratification of your wishes may not be a serpent sting to you, as mine has been.”¹⁸⁴ As Walton’s ship is enclosed by ice and fog and his crew

threatens a mutiny, the danger of exploration and discovery that pervades his own enterprise becomes an ever-closer analog to that of Frankenstein who is on board to bear witness to the parallel.¹⁸⁵

Although at first Frankenstein attempts to dissuade Walton from his pursuit and entreats him to take a lesson from his own misadventure, it is Frankenstein who ultimately makes the passionate appeals to Walton's crew so as to put down the threat of mutiny and dissolve their insistence on abandoning their mission to cross the northern pole.¹⁸⁶ This appeal epitomizes the Promethean spirit of his rousing speeches:

What do you mean? What do you demand of your captain? Are you then so easily turned from your design? Did you not call this a glorious expedition? And wherefore was it glorious? Not because the way was smooth and placid as a southern sea, but because it was full of dangers and terror; because, at every new incident, your fortitude was to be called forth, and your courage exhibited; because danger and death surrounded it, and these you were to brave and overcome.¹⁸⁷

At the close of his life Frankenstein even explicitly countermands his earlier despairing renunciation of the Promethean spirit, acknowledging that where he failed as a madly inspired discoverer Walton and others like him may succeed: "Farewell, Walton! Seek happiness in tranquility, and avoid ambition, even if it be only the apparently innocent one of distinguishing yourself in science and discoveries. Yet why do I say this? I have myself been blasted in these hopes, yet another may succeed."¹⁸⁸

Chapter 7. Atlas, the World Builder of Atlantis

Atlas is the titanic brother of Prometheus, and an indispensable complement to his madly inventive but otherwise irresponsibly imbalanced persona. Atlas appears in Aeschylus' *Prometheus Bound* as the only other titan who has suffered as much injustice at the hands of Zeus as his rebellious brother. In fact, his Greek name simply means "to bear" – a reference to his being condemned to hold up the celestial sphere, to forebear or endure while bearing the weight of the entire Cosmos on his own shoulders. This titanic task lies at the basis of the adoption of his name for models and maps of all kinds, beginning with the star charts used by navigators. An *atlas* can be a pictorial model of the world or, as in medical atlases, it can be a skeletal frame.

I equate this with what Heidegger calls the *Weltbild* or *Gestell* definitive of how technological Science captures Nature in terms of a "world picture" or "framework." Heidegger goes so far as to call our epoch the "age of the world picture." At the outset of this age the French revolutionaries invented the metric system as a standard world-encompassing measure, which was subsequently universalized not only through the Napoleonic conquests but also on account of its adoption by British imperialists. The measurement practices of various traditional cultures had whole belief systems implicated within them and the way in which these were shattered by the colonial imposition of our metrological system is one example of the inescapable political dimension of techno-scientific development.

The Greeks must already have at least tacitly understood this, since they saw Atlas as the King of Atlantis – in other words, as the world sovereign. In his dialogues *Timaeus* and *Critias*, where he develops the lore of Atlantis, Plato explicitly picks up where *Republic* leaves off, referring to its narrative as the subject of a discussion on the preceding day, and there are a few passages in *Cratylus* on the world ages that are also connected to this lore. In these passages, Plato delineates three classes of humanoid beings: gods, mortals, and a third class of beings that he refers to as *daemones* and

gigantes. They represent human existence hubristically rising to a level that defiantly challenges the gods. According to Plato, there was an epoch between the “iron age” of mortals that we currently dwell in and the “golden age” when the gods themselves ruled the Earth. It was an age wherein a superhuman race born of a hybridization of gods and mortals usurped the sovereignty of Zeus and his fellow Olympians and established a civilization populated by *heros* – a word whose connection to the root *eros* refers to the mating of gods and mortal women that produced these dangerously bold, brilliant, and beautiful demigods. Read in light of these passages from *Cratylus* it is clear that the Atlantis of *Timaeus* and *Critias* is one and the same as this gigantic or daemonic civilization of the previous world age. Like the myth of Prometheus, the folkloric legend of the world civilization named after Atlas survived into the modern age and has been the subject of numerous retellings. I focus on the “New Atlantis” of Sir Francis Bacon, who after Descartes holds the greatest claim to being the founder of modern technological science. Since Bacon, Atlantis has become synonymous with the scientifically minded Utopia that has measured and conquered the world, one where humans have attained godlike abilities.

I argue that this archaic leitmotif of science fiction is actually our own civilizational self-image. Bacon’s appropriation of the realm of Atlas, of a civilization that builds atlases of the world, is as bound up with naval exploration and colonialism as Plato’s legend. What the quest of some to find the cradle of our world-colonizing civilization in Atlantis tells us, above all, is how we see the cosmopolitan destiny of our own people unfolding. We could see “Atlantis” as a futural projection of the cosmopolitan destiny of the maritime colonial civilization of the Greeks, with its origins on Crete but its culmination in America. As Gilles Deleuze argues, with reference to Edmund Husserl, to become ‘Greek’ in the sense that the Germanic and Celtic barbarians did is very different than becoming ‘Indian’ or ‘Chinese.’ The Greece of Utopia that began with Plato and that reached its culmination in the cosmopolis of Alexandria was already built on an act of treason against the traditional and native culture exclusive to the Greeks. It was born out of a unique insight into Nature beyond the conflicting worldviews of traditional cultures, one that the Greeks were afforded on account of their unusual geographical position and the uprooting that they experienced during the Persian

invasion that prompted the rise of the Delian League and, eventually, Alexander's world-unifying conquest. Since then, an intercontinental community of those bound together by the Hellenic heritage has been emerging, with the most recent expression of this Atlantic Civilization being the *North Atlantic Treaty Organization* (NATO). To recognize this is to consciously appropriate the Greece of Utopia as the original science-fictional homeland, the prototype of a boundlessly exploratory culture willing to risk dystopia so as to either build a paradise on Earth or to colonize Heaven.

We can reclaim the unique cosmopolitan promise of our civilization by revealing the religiosity implicit in our world-colonizing Technoscience, so that instead of being a force of blind instrumentalization on account of a false conception of rationality it opens people's eyes to their power to bear heaven on their own shoulders. This would involve a dialectical transformation of our religious worldview. There is an exact parallel to the Greek mythology of Atlantis in that other fount of Western Civilization, ancient Israel. The Bible tells of a civilization spawned by the interbreeding of fallen angels and mortal women, a culture that the Heavenly Lord deems so corrupt that he wipes the Earth clean of it in the flood of Noah. Just as Prometheus is the aspect of the divinity of Technoscience qua craftily inventive and knowledge-seeking Rebel, Atlas is the other aspect of Lucifer: the world sovereign.

7.1 The Aesthetic Idea of Atlas

Atlas figures prominently in Aeschylus' *Prometheus Bound*, as the only person who has suffered as much injustice at the hands of Zeus as has his brother Prometheus.¹ In his *Theogony*, Hesiod describes the punishment of Prometheus' brother in these terms: "And Atlas through hard constraint upholds the wide heaven with unwearying head and arms, standing at the borders of the earth..."² To return to the mythologist Carl Kerényi for a moment, he observes that: "Atlas is not by accident a brother of Prometheus. His cast of mind is indicated in the *Odyssey* (I 52); he is *oloóphron*, 'baleful,' an epithet which sums up all the crafty and dangerous characteristics which Hesiod attributes to Prometheus."³ His punishment at the Western edge of the Greek world should be taken together with that of Prometheus at its Eastern edge, to suggest that these fraternal Titans measure the Earth inhabited by the Hellenes.⁴ There are archaic vase paintings that depict

Prometheus chained to the pillar, with the blood spilled by his eagle turning into flames of his stolen fire, and just across from him stands Atlas bearing up the heavens with a Serpent behind him.⁵ This vase theme may well be Friedrich Nietzsche's source for the image of the Eagle and the Serpent in *Thus Spoke Zarathustra*, or perhaps we are just seeing the unconscious ectypal expression of archetypes that are intuited to be twins – as in the architecture of New York City's Rockefeller Center.

Since the labor of Atlas allows chronological time to begin, and since the theft of Prometheus and his willingness to rebel despite the prospect of punishment inspires the enterprise of human industriousness, these two archetypal figures of hardship and suffering frame the fundamental conditions of our temporal existence.⁶ As far back as Homeric Greece *Atlas* was known as one who has fathomed the depths of the entire Ocean, and yet who holds the celestial sphere aloft. Derived from the ancient Greek root *tienai* – meaning “to suffer”, “to endure” or “to bear”, the name of this bearer of the heavens was taken up by map-makers as the designation for world-encompassing schematization. All modern science, grounded as it is on mathematical Physics, is based on this astronomical model. The mechanics of the celestial sphere, which is as radically different from living processes as one can imagine, is paradigmatic for modern science.⁷ Since “the main object of science is to forecast and measure,” the paradigm of all scientific calculation is set by celestial mechanics.⁸ It only makes sense that one capable of grasping the astral sphere would be able to encompass the Earth. The *atlas* has also been adopted in other sciences, such as Topology, where it is “a collection of top-dimensional subspaces, called charts... which comprise the entirety of a manifold, such that intersecting charts... are compatible in a certain way”⁹ and also in Anatomy, where an *atlas* refers to: “a detailed visual conspectus of something of great and multi-faceted complexity, with its elements splayed so as to be presented in as discrete a manner as possible whilst retaining a realistic view of the whole.”¹⁰

If the atom bomb exploding at the Trinity test site is an epitomizing image of the Promethean archetype, then we are tempted to take the first photograph of the Earth captured by a space-based satellite as the same for the aesthetic idea of Atlas. Yet this metaphor does not go far enough. In “The Age of the World Picture”, Heidegger insists that the word “picture” [*Bild*] as he employs it does not mean a copy or mere imitation of

something, but a structured image [*Gebild*]. The word *Bilden* means to set up a preformed model [*Vor-bild*] and to set-forth a pre-established rule [*Vorschrift*].¹¹ He points us to the expression “We get in the picture,” so as to suggest the active setting-upon beings. Man has, as it were, ‘come on the scene.’ The novelty of the motion picture and the activity of its director seem to be the key metaphor here. Heidegger writes:

...world picture, when understood essentially, does not mean a picture of the world but the world conceived and grasped as picture. What is, in its entirety, is now taken in such a way that it first is in being and only is in being to the extent that it is set up by man, who represents and sets forth. Wherever we have the world picture, an essential decision takes place regarding what is, in its entirety... There begins that way of being human which mans the realm of human capability as a domain given over to measuring and executing, for the purpose of gaining mastery over that which is as a whole.¹²

Meanwhile in an “Atlas of the World,” *history* – including *natural history* – is counted on as a rigorous historiographical schematization of the past as ‘fact.’ Both are thereby objectified and “set in place” [*gestellt*].¹³ We should hear in this German term *gestellt*, the verb *stellen* – which means to set in place, to set upon, as in challenging-forth. In other words, truth as representation is *not* mere correspondence; but a *taking* to be true, a *setting-upon and securing*. What is essentially distinctive about modern science is the projection of a fixed ground plan in respect to some realm of beings in Nature or History. The word Heidegger uses for “ground plan” in the original German is *Grundriss*. The verb *reißen* can mean to tear, to sketch, or to design, while the noun form *Riss* means either tear, gap, or outline.¹⁴ All modern scientific research involves not just making a sketch of beings, or projecting an outline onto them, but tearing open what is given and building a design into it. In other words, Atlas literally holds up our world. He builds it. Each and every phenomenon taken as an object of scientific theory must be refined, or rather, re-defined, in such a way as to conform to the ground-plan or *atlas* that has in advance rendered objects of its kind predictively calculable. The ground plan is already latently designed into the diverse apparatus and machinery of experimentation, so that nature is controlled in advance and constrained to show itself in a particular way.

In his book *World In The Balance*, Robert Crease inadvertently provides us with an excellent case study of the world-colonizing power of Atlas as the agent of Enframing. In Crease's view the story of measurement in many ways epitomizes the various other manifestations of globalization, and perhaps also establishes the framework for them. It is, he claims, just as startling a development as if the entire world quite suddenly came to speak a single language.¹⁵ Crease acknowledges a debt to Heidegger at several points in his text and the following remarks, in particular, are relevant to a Heideggerian reading of *World In The Balance*:

Oddly enough, the plunder, ravagement, and exploitation that accompanied British imperialism strongly aided the metric cause in the long run. That nation's horrendous treatment of cultures in Asia, Africa, and elsewhere in the nineteenth century did much to destabilize indigenous cultures, disrupt habit and infrastructures, and wipe out local measuring systems, opening up the possibility of international consolidation around the metric system in the twentieth.¹⁶

The phrase "oddly enough" is quite out of place here. Heidegger would have seen nothing odd about it at all and there are two reasons why he would take objection to Crease's treatment of the Chinese and West African cases of colonial European uprooting of local measurement practices. Firstly, he would not see them simply as an *accidental* "downside" of an otherwise positive globalizing development that fosters the unity of mankind. Rather, he would have viewed the destruction of the Akan world and the violent assault on the Chinese one as absolutely integral to the rise of the Enframing mentality characteristic of the modern age of Western Civilization. Secondly, he would have rejected any attempt to analogize these two cases of local worlds being encompassed by the global network of Enframing. To his mind, the case of China would be essentially different from that of West Africa. Whereas the advent of Enframing could only have destructive consequences for the native West African world, it would have de-constructive consequences for the Chinese one that would unleash the essence of Eastern spirituality as a dimension from out of which reflection on Enframing is possible.

To say that the African Gold Coast practice of weight measurement was inefficient would be a gross understatement. All attempts to correlate specific designs to

arithmetical weight values have failed.¹⁷ There is no quasi-scientific system of measurement whatsoever underlying the iconography of these weights. No one has been able to determine any correlation even to a natural standard such as seeds or berries.¹⁸ Moreover, since buyers would bring their own weights *and scales* to the market, the gold dust would have to be measured on both the scales of the seller and that of the buyer.¹⁹ The implicit trust that comes with an established *system* of measurement was entirely lacking. Furthermore, Akan women – who were often employed in the capacity of vegetable vendors – were not allowed to handle weights, and were extremely suspicious of the weighing practices of buyers. They would criticize their weights and scales, and force them to weigh and reweigh without being able to even touch the weights themselves. Since adulterated gold dust was often used, a great deal of time would also be squandered on using shells to separate genuine gold dust from an adulterating agent – such as finely ground bronze. A purchase worth a few pennies would usually require just as protracted a process of negotiation and debate as one worth several ounces of gold.²⁰

One might suspect that these inconveniences were endured on account of the fact that some deep mystical or metaphysical symbolism was encoded in the designs of the Akan weights. This is not the case.²¹ No European or African scholar has been able to make a serious case that there is any cosmological conception whatsoever underlying these crafts products.²² The designs are whimsical. Heidegger, reading Crease's own account of the Akan measurement practices, would certainly have disagreed with Crease's summation that it represents "one of the most original, innovative, and social measuring systems ever devised on the planet."²³ He would have seen it as barbarism plain and simple, a time and energy consuming inconvenience suggestive of a lack of striving towards any higher intellectual or aesthetic achievement. The scholars that Crease cites refer to the Akan measurement practices as having a dramatic element, but surely a culture content to waste so much time and energy over buying some vegetables at the bazaar is one unlikely to ever develop a real dramatic art. There is in all likelihood a deep, tacit connection between the metric system and the *Götterdämmerung*.

Finally, although the Akan weights and gold measures appear to have affinities with certain objects of Modern Art, it would be an egregious anachronism to think that the Akan would have been capable of seeing them in this way. Even the European

colonialists of the 19th century would not have been able to view them as fine art objects.²⁴ Modern Art, particularly sculptures with a quasi-African gestalt, come at the end of an Atlantic civilizational trajectory of aesthetics that begins with classical Greek sculpture and that, consequently, presupposes – in its infancy – a stage of culture that the Akan never attained in their entire history. This is underlined by Crease’s observation of how modern artists, such as Marcel Duchamp were influenced by Henri Poincaré’s position of “conventionalism” with respect to the sciences, the view that “geometries, and indeed all scientific laws...” are “mere conveniences – mental projections or frameworks – rather than actual descriptions of nature.”²⁵

Not only is this an understanding that could never have been arrived at by the West African natives, it is one that even escaped the Chinese civilization whose isolation promoted an introverted and complacent adherence to traditional cosmological views. Unlike the Akan measuring practices, those of the Chinese were bound up with court rituals of religious significance *and metaphysical conceptions of the Cosmos* – so much so, that a change in the metrological system would be something akin to a significant onto-theological reformation.²⁶ Crease illustrates this through the story of Xun Xu, a court official from a politically well-connected family involved in the overthrow of the Wei dynasty and its replacement by the Jin dynasty. In the third century AD, Xun tried to seize the opportunity afforded by this political upheaval to introduce a small modification of the Chinese measurement system.²⁷ After being recruited by an elder cousin to reform the new dynasty’s musicological practices, instead of carrying out the usual scholarly reexamination of inherited ceremonies with a view to validating their technical accuracy, Xun dug up an old cache of bronze pitch regulators called *lüs* and he compared the sounds of these to the ones presently being used at court, concluding that the current instruments were out of tune with the ones of older orchestras which had properly embodied cosmic harmony.²⁸

Xun’s metrological reformations were very limited in their impact even during his own time period and within the cloistered environment of the court; they did not outlast the demise of the political faction with which he was associated.²⁹ On account of China’s extreme isolation from other significant civilizations, the connection between musicology, metrology, court politics, and traditional religious views of cosmic order

persisted for over a thousand years.³⁰ However, despite their isolation, unlike the Akan, the Chinese not only had a metaphysical understanding of the Cosmos bound up with their measurement practices, they also had a deeper intuition of the nature of reality *beyond* this metaphysical system and the ritualistic culture in which it became encrusted. The assault of Enframing by means of European colonialism served to shatter this ossified structure and free the soul of the Orient for an encounter with Occidental metaphysics as expressed in modern technological science. This brings us to the darker side of Atlas, his status as the world sovereign, which is emblematic of the fact that techno-scientific development is a world-colonizing force. This aspect of Atlas manifests itself in the writings of Plato and is reiterated in Sir Francis Bacon's *The New Atlantis*.

7.2 Atlantis: The Realm of Atlas in Plato and Bacon

In the opening passages of *Timaeus*, Plato offers us a recap of the social organization and educational policies of the ideal state of *The Republic*.³¹ Here, Plato makes it clear that the discussion between Timaeus, Socrates, Critias, and Hermocrates in this dialogue is taking place only a day after their conversation concerning the nature of Justice in the soul and in the city-state. Socrates wants to, as it were, see this ideal city in action – especially to see it brilliantly and honorably defending itself through the course of some great struggle or conflict that would test its metal.³²

Critias then volunteers to tell a *true* story that he heard in his youth from his grandfather, whose father had heard it from Solon – the venerable sagacious lawmaker of Athens, who brought it back from a journey to Egypt. A few things must be noted about the attributions here. First, Solon was the most revered Athenian and to attribute anything to him falsely would have been considered a very wicked deed. So Plato is establishing as infallible a pedigree for this story as one could, especially since he claims that had Solon completed his aborted epic poem, it would have surpassed the works of Homer and Hesiod.³³ Critias emphasizes that – as a boy, with the unique absorptive memory of a fascinated child, he not only heard the story repeatedly but, in his youth, he even studied Solon's actual manuscript – which was a family heirloom.³⁴ At least three times, Plato repeats the claim that this story is not a “legend” or a “fiction”; it is a “strange” but “true” story grounded in “actual fact” and “the world of reality.”³⁵ By contrast, he describes the

Republic as fiction. Critias claims to have been thinking of this story the whole time that Socrates was outlining his vision of the ideal state on the previous day. Plato's remarks on geological changes that have taken place, such as the erosion of topsoil and the deforestation of the Acropolis, by way of comparing the geography of antediluvian Athens to the city of his time, is one element that lends his account a realistic tenor.³⁶

Solon is said to have received this story while on a journey to Egypt, to a city at the Nile Delta called Sais, which shared its patron goddess – namely Athena, or as they called her “Neith” – in common with Athens. In other words, this is the ‘sister city’ of Athens in Egypt. Note that the Greeks, and then even the Romans, throughout all of classical antiquity, viewed the ancient Egyptians as an older and wiser race than themselves and saw Egypt as a more accomplished – albeit declining – civilization with primordial origins. It is not an accident that when a single cosmopolitan capital of Western Civilization emerged in the classical age, it was neither the Greek city of Athens nor the Italian city of Rome, but Alexandria in Egypt.

The priests of the Egyptian temples were the preservers of the most ancient knowledge of their civilization and they tell Solon that the Greeks are really only children compared to the Egyptians. Even the history of Athens is better preserved among these Egyptian priests of her sister city than among the Greeks. The priests explain to Solon that the reason for this is that apocalyptic natural catastrophes befall the world over great epochs of Time – alternating in cycles of destruction by deluge and annihilation through fire. During these events the stars appear to fall from the sky. At one point he describes it as “a declination of the bodies moving in the heavens” and at another time as a calamity wherein “the stream from heaven [that], like a pestilence, comes pouring down.”³⁷ Each time only the most geographically isolated and uncultured specimens of mankind survive, and each time they work their way back up out of devastation, poverty, famine, and so forth to reestablish a lettered culture, their cities suffer from the same fate once more.³⁸ Due to certain unique geographical features, Egypt is relatively immune to these cyclical catastrophes and consequently has preserved records of the epoch before the last worldwide deluge.³⁹ Plato repeatedly tells us the date of that catastrophe was “nine thousand years” before his time.⁴⁰

Ostensibly, the Egyptian priests give Solon this story to bring back to Athens so that his own people can know how valiant their ancestors were, and Critias is also telling the story to Socrates with the aim of comparing the citizens of his ideal state to the nearly identical ones of antediluvian Athens. Their guardians include both men and women, reflecting the attributes of Athena herself as a warrior goddess of wisdom, and they are separated off from the rest of the citizens, living an austere and communistic life of virtue.⁴¹ However, we soon see that at least what we have of this story – which begins in the early part of *Timaeus*, and then continues in *Critias* only to break off very ominously – centers rather around the aggressor against Athens, an antediluvian world empire by the name of “Atlantis.” This account, in these two dialogues of Plato, is the first mention of Atlantis that has survived from ancient times to come down to us.

Plato’s Atlantis is an island empire beyond the “pillars of Hercules” – what we call today the Straits of Gibraltar. The central island is described as “larger than Libya and Asia combined.”⁴² In Plato’s time, “Asia” was a reference to the greater Persian Empire (in other words it did not go further than Afghanistan in the East, southern Russia in the North, and the Persian Gulf and northern India in the South). If one combines this with “Libya” or central North Africa, we are talking about a landmass the size of the continental United States. In addition to the plain where its central city was located, it was famed for a ring of tall mountains that descended precipitously into the Ocean.⁴³

By combining every technology and luxury known in his own time in a single place and in an unsurpassed manner, Plato portrays Atlantis as a highly advanced civilization that reached the zenith of its power some 12,000 years before our time. Its hydraulic rings, cyclopean walls, and bustling harbors were titanic works of engineering, and it was engaged in the industries of mining precious metals and quarrying stone for its megalithic buildings. The Atlanteans employed complex agricultural techniques, had an especially well developed ocean-going Navy lodged at harbors that employ subterranean canals for triremes, they enjoyed luxuries such as indoor plumbing for seasonal cold and hot baths, and many natural fragrances that were developed into perfumes.⁴⁴

Ultimately they became so wealthy and powerful that they turned outwards and, totally unprovoked, launched a naval invasion into the Mediterranean that subjugated all of Europe and Asia. Only Athens was able to rebel and, like David against Goliath little

Athens repelled the Atlantean forces and even liberated others in the Mediterranean. The war between Atlantis and Athens is described as “the Great War” between those within the Mediterranean and those who came from outside it. The war ends, not in the victory of either side, but in the decision of the gods to decimate mankind in an earthquake and worldwide deluge.⁴⁵

In a fragment from *Cratylus*,⁴⁶ Plato has Socrates – in dialogue with Hermogenes – lay out a division of humanoid beings into three types. Between gods and mortals there is a middle type of humanoid being born of unions between mortal men and goddesses or mortal women and gods. These hybrids are known as *daemons* or *heros* in Greek, i.e. demigods, those born of *eros* between gods and mortals. They were also called *gigantes*, which is the source of our word “giants”. So the “giant” whose tomb Gyges finds in the *Republic*, with its magic ring and the many other wondrous objects that he does not describe in detail, is one of these hybrid people. They were not only of impressive physical stature and beauty, but were both bolder and wiser than mere humans. Plato says that even wise humans with mortal bodies have *daemonic* souls and, with reference to Hesiod, he claims that in an age of remote antiquity there was “a golden race of men”, by which he means not that they were literally made of the metal gold, but that they were “godlike” men. The rule of these *daemons* gave way to the rise of an iron race. This is a reference to the “golden age” and “iron age.”

These passages link up to Plato’s three classes of gold, silver, and non-precious metal souls in *Republic*. The account of Atlantis in *Timaeus* and *Critias*, which picks up where the *Republic* left off, completes this picture of the classes of souls identified with metals being correlated to world ages also identified with those metals. If we read the Atlantis account carefully, we see that the Atlantean age represents a stage between the age of the golden men and our own age of corruption where the lowest of the three classes of souls is dominant. The age of Atlantis is, as it were, the “silver age.” We can see this by looking at how the Atlantean age arises from out of the Golden Age when mortals were “the children and disciples of the gods.”⁴⁷ In the Golden Age, gods and goddesses divided the Earth among themselves in an orderly fashion and each, in her or his own territory, fashioned mortals from out of the Earth and “when they had settled them, fell to feeding [them], their bestial flocks there, as herdsmen do their cattle.”⁴⁸ One

of these settlements was a huge island in the world Ocean beyond the straits of Gibraltar (“the pillars of Hercules”). It belonged to Poseidon (Neptune) and he filled it with hybrids that were offspring of his sexual union with the human daughter of one of the first “earthborn men of that region.” Poseidon undertook a massive project of terraforming engineering on this island “with his own hand – a light enough task for a god”. He established his sons as the rulers of this island and other smaller surrounding ones. Foremost among these rulers was his eldest son, *Atlas*, after whom the main island was named *Atlantis*, and the Ocean surrounding it took on the designation of *Atlantic*.⁴⁹

Initially these godlike men prospered without seeking wealth and honor for their own sake, and amassed them only as a derivative of their virtuous lives. However, over time, increasing interbreeding with mortals decreased the divine element in these Atlanteans – who were hybrids to begin with – and as the demigods became more and more human, and as certain humans were imbued with traces of the divine their ambition increased proportionately. Corruption set in as a consequence of this intermixture. The superhuman Atlantean civilization reached an unprecedented height of material prosperity and prowess, but it also became irreverent towards the gods and bent on the domination of all other human populations on the Earth. As a result of this Zeus decided to call a convocation of the Gods to pass judgment on the Atlanteans with a view to disciplining them to get back in tune. This is where the text of *Critias* breaks off.⁵⁰

We may infer that the corruption of the Atlanteans and their attempt to conquer all of the other human communities established and ruled by the gods in the golden age marks the beginning of the silver age of an Earth ruled by Atlantean demigods, and the destruction of Atlantis marks the passage from the silver age to our own dark age of total forgetfulness (*lethea*). This frames the myth of the metals and the three classes of souls in a historical context. Especially when viewed in light of the comments in *Cratylus* that even in the age of “men of iron” the wisest men are still “men of gold”, it suggests that the hierarchical organization of society laid out in the *Republic* is not inherently just – in a timeless manner – but is what Justice would look like in an age of terminal spiritual decline towards oblivion. Although Plato exoterically claims that it is perverse to think that the gods quarrel among themselves, the conflict between the heavenly Zeus and the submarine Poseidon (Neptune) – with his Trident that eventually became identified with

that of Satan – is notorious in Greek mythology, as can be seen in Homer’s *Odyssey*. The Atlanteans were the people of Poseidon, and Zeus decides to destroy them. He also destroys the ‘virtuous Athenians’ along with them. Are those the actions of a just god? Was the Atlantean rebellion justified? Where do Plato’s sympathies really lie?

Like the myth of Prometheus, the legendary civilization of King Atlas survived into the modern era as a symbol of the god-like powers human beings could attain through technological Science. This began with the very first myth of the scientific society, *The New Atlantis*. Sir Francis Bacon’s new “Atlantis” is actually in the Pacific Ocean, since the sailors who wind up taking refuge on the secret island set sail from Peru towards China and Japan.⁵¹ In accordance with their “laws of secrecy” the inhabitants of the island have remained veiled from the rest of the habitable world while developing an extensive knowledge of it.⁵² Though isolated by choice, the New Atlantis is also cosmopolitan in composition. The ancestors of its citizens hail from diverse ethnic backgrounds and geographical locales such as the Mediterranean, Persia, and India.⁵³ The refugees lost at sea suspect that this ability of the new Atlanteans to remain hidden from the rest of Earth while amassing a world-encompassing knowledge is a manifestation of supernatural power, as if this were “a land of magicians, that sent forth spirits of the air into all parts, to bring them news and intelligence of other countries.”⁵⁴

In an attempt to disabuse the visitors of this notion, the governor explains that the civilization of this island has survived from a time in remote antiquity when there was a far superior capacity for seafaring (than in Bacon’s time, at the height of Oceanic colonization, above all by the Spanish and Portuguese), a time before the great flood when the island of Bensalem (the “New Atlantis”) had extensive commerce with Plato’s ancient Atlantis which, interestingly, he locates in North America.⁵⁵ Since the destruction of the old Atlantis, a secret society on the remote Pacific island has sent out “Merchants of Light” to every other nation.⁵⁶ The mission of these “Mystery-men” who “disguise themselves under the names of other nations” is to procure for the New Atlantis “knowledge of the affairs and state of those countries to which they were bound, and especially of the sciences, arts, manufactures, and inventions of all the world; and withal to bring unto us books, instruments, and patterns in every kind.”⁵⁷

These international men of mystery seeking illumination empower the New Atlantis to, as it were, build *atlases* of everything in the entire world or, rather, it turns the island into a living *atlas* of the world. The leader of the scientific secret society that is the island's true governing power, and also something of a priestly caste, explains his titanic spiritual mission in these terms: "The End of our Foundation is the knowledge of Causes, and secret motions of things; and the enlarging of the bounds of Human Empire, to the effecting of all things possible."⁵⁸ Scientists of the Foundation analyze the scientific books and technological patents of every invention from other countries, not only to the end of amassing extant knowledge or replicating the inventions, but with a view to sharpening questions that lead to new discoveries and making improvements on existing inventions, adapting and synthesizing them to spark innovations impossible in any other nation without such global resources to draw upon.⁵⁹

This does not go without recognition. Instead of statues of gods or kings, the island features a cosmopolitan pantheon of monumental statues of every inventor from all the peoples of the world.⁶⁰ The Foundation does not, however, share its scientific discoveries and technological breakthroughs with others outside the island and it secrets some of these away from even the citizens of the New Atlantis, based on an evaluation of their social impact and whether certain people are psychologically prepared to employ them in a positive fashion.⁶¹ Scientific research and development is organized in a hierarchical and compartmentalized manner, and it is presumably the "Interpreters of Nature" who "raise the former discoveries by experiments into greater observations, axioms, and aphorisms" that would be involved in decision on such matters, rather than the technicians who carry out various experiments.⁶²

Sir Bacon's account of what the Foundation of the New Atlantis has built by drawing on the scientific knowledge and technical expertise of every culture over the course of thousands of years presents us with one of the most visionary science fictional narratives for centuries to come. That it was written in the early 17th century boggles the mind. The refugees lost at sea are, albeit politely, penned into a certain port city of the island and not allowed to wander far, and for good reason since the superhuman physical structures on the island might give them a terrible shock.

There are numerous towers up to half a mile in height, from which astronomical and atmospheric observations are made; the entire island is surveyed from these skyscrapers, and they are also used for preservative refrigeration.⁶³ There are subterranean caves that have been hollowed out in some cases to a depth of three miles beneath the great hills and mountains.⁶⁴ In addition to being used as mines, the unique barometric pressure, temperature, and mineralogical composition of the air in these caves makes them ideal for curing certain diseases and also for chemical experiments that yield “new artificial metals, by compositions and materials which we use, and lay there for many years.”⁶⁵ The island features wind and hydro power plants installed in violent streams and steep waterfalls, as well as desalination plants, and artificial wells and fountains for medicinal purposes.⁶⁶ A network of tubes and pipes conveys sounds in strange lines that crisscross the island; in other words, the New Atlantis has a telephone system.⁶⁷ The skies of the island are streaked by airships and it also harbors a fleet of submarines.⁶⁸ Not everything that flies in the air or goes under water is manned. In addition to manufacturing androids, the Foundation produces robots of birds, fish, and other animals.⁶⁹ These mechanical marvels are produced by industrial plants, which also churn out powerful engines and complex clockworks.⁷⁰

What lies inside various buildings is even more striking than what one could survey outdoors. In certain laboratories metals are vitrified and minerals, crystals, and magnets of extraordinary kinds are produced.⁷¹ There are chambers where various atmospheric phenomena are artificially replicated with a view to the generation and modification of certain forms of life.⁷² Special gardens allow for cultivation of the most exotic diversity of plants and flowers are grown out of season and with unnatural colors, smells, and tastes; some of these are for medicinal use.⁷³ A bestiary containing all sorts of rare animals, including pools with sea creatures, is used for experiments with a view to the human application of “continuing life in them, though divers parts, which you account vital, be perished and taken forth; resuscitating of some that seem dead in appearance; and the like.”⁷⁴ More radically, they are subjected to experiments that dramatically alter their phenotypic expression (their height, shape, etc.) and that hybridize certain species with others in order to create new ones that are still capable of reproduction.⁷⁵ The best of every cuisine in the world is replicated, especially in order to

promote health.⁷⁶ Water is purified and even modified at the molecular level, rendering it so fine in composition that it can pass right through one's hand.⁷⁷

Optical laboratories contain microscopes for analysis of bodily fluids, they produce glasses as an aid to sight, manufacture powerful telescopes, and devices more sophisticated than prisms that can isolate any part of the light spectrum in an uncolored and transparent medium, and other exotic light sources such as laser beams and phosphorescent materials.⁷⁸ Sonic laboratories can produce a range of sound hitherto unknown, allowing for ethereally graceful music with seemingly impossible tones, but also for modifying the sound of anyone's voice in any way.⁷⁹ The optical and sonic capabilities are brought together with others in "houses of deceits of the senses" where all manner of "false apparitions, impostures, and illusions" are perfected with the potential of making 'miracles' and 'magically' distorting people's sense of space and time, but this knowledge is allegedly used foremost to avoid falling prey to deceptions.⁸⁰

7.3 The Cosmopolitan Neo-Colonialism of Atlantic Civilization

It is not incidental that both Plato and Bacon's iterations of "Atlantis" as the archetype of the technoscientific society are deeply bound up with colonialism. The idea that colonialism and cosmopolitanism are somehow at odds with one another is bizarre and ahistorical. It is often forgotten that the British, the French, the Spanish, and other members of the European International System did not invent colonialism, nor should their early modern, highly centralized, monarchist, and quasi-nationalist form of colonialism be taken as representative. Classical Greece, enduring into Hellenistic Rome, was the colonialist civilization par excellence – a maritime empire that had spread colonies throughout the entire Mediterranean basin. The Roman adoption of Greek culture was not a late development in classical antiquity. Already in the time of Pythagoras, at the dawn of Philosophy, there was as much or more of Greece in Italy than on the mainland. The first cosmopolis known to recorded history is Alexandria, a Greek colony founded by Alexander the Great in a conquered Egypt.

There, at the height of classical civilization, a level of scientific understanding of the Cosmos and of the human place within it was attained that would not be equaled again until the 17th century.⁸¹ At this great center of learning, scientists from as far afield

as Spain and Persia came together to discover scientific truths that would subsequently be long forgotten, such as the fact that the Earth revolved around the Sun, and they also drew up remarkable mechanical patents including one for a steam engine. It is *this* city, and not Athens or Rome, that was the capital of our *cosmopolitan* classical civilization – until it was betrayed by Judeo-Christian fanatics and then overrun by barbarian hordes. Here a woman led the entire Platonic Academy until she was skinned alive on the orders of a Catholic bishop and the world’s greatest library and laboratory, that she fought so hard to protect, was burned to the ground by a Judeo-Christian mob. What little the murderers of Hypatia left intact was effaced several centuries later by Arab Muslim invaders. This might as well be seen as a second destruction of Atlantis, because that is the archetype of the kind of society that Alexandrian Egypt was evolving towards.

Discovery as an *activity* presupposes the cultivation of a definite *type* of aesthetic/cultural context that first makes *inquiring individuals* possible. The homeland of Philosophy is the Greece of Utopia, which runs the risk of Dystopia. Beginning with Plato, in dialogues such as the *Republic*, *Timaeus* and *Critias*, there is a Greece of *utopia*, and it is *this* unhistorical homeland of Philosophy that appropriates other peoples and is at the same time re-imagined by them. *Eu-topos* – the word has a very significant double meaning: “no place” and “better place.” The *topos* is also the root of topography and is therefore bound up with the crafting of *atlases*. To be utopians is to be the people of permanent revolution, to imagine that the world can be a better place and that society can be shaped in a way that it has never been before.⁸² It is to will backwards against time from out of the future – to will change “now here”, as in the title of Samuel Butler’s utopian text *Erehwon*.⁸³ In this sense at least, “Atlantis” is *our* future past.

What we think of as “the scientific outlook” is really a mythic work of art. It is a *techne* that is a *poesis*, but it is unlike any other total art-works [*gesamtkunstwerke*] that define the worlds of traditional cultures. In *Against Method*, Feyerabend recounts how in an early article entitled “Nature as a Work of Art” he argued that “the world of modern science (and not only the description of this world) is an artwork constructed by generations of artisan/scientists” – a view with which I totally agree.⁸⁴ *Against Method* ends with this reflection: “The arts, as I see them today, are not a domain separated from abstract thought, but complementary to it and needed to fully realize its potential.

Examining this function of the arts and trying to establish a mode of research that unites their power with that of science and religion seems to be a fascinating enterprise and one to which I might devote a year (or two, or three...)."85

There is no "Science" without *the scientist* – a very definite individual whose existence presupposes a certain type of cultural-historical situation similar to the one in which the Greeks found themselves at the time of Pythagoras. What was reborn in our Renaissance was a titanic aspiration for what either never occurred to the seekers of Nirvana, or was rejected by them as foolish hubris: *the tragic will to risk deadly dystopia in order to build an earthly utopia*. This leitmotif of science fiction is the core of our Promethean way of life. Whether remains of Atlantis are ever found somewhere in the Atlantic between Europe and the Americas, or whether it turns out to be a distant memory of the cradle of Greek culture in Minoan Crete and Santorini, the tragic *folklore* of Atlantis already binds together the European and American peoples. From deep within our philosophical heritage, it is destining us towards a realization of the Cosmopolis.

The civilization of Atlas is neither culturally-geographically "Western" nor an ideological product of "Western Philosophy" as if there were something philosophically Eastern, exotically Oriental, that could stand opposed to it. As Gilles Deleuze argues in *What Is Philosophy?*, the Greeks had to first become philosophers before barbarians who aspired to become philosophers had to become 'Greeks.'⁸⁶ Philosophy is not Greek in the sense that the Athenians at one point *falsely* viewed themselves as autochthonous – as the *native sons* of a given land. Rather, the first philosophers were refugees, exiles, travelers, and strangers.⁸⁷ Plato and Aristotle are not the beginning, but the culmination. These queer bastards of the Pre-Socratic era did not come from Athens – they came *to* Athens together with traveling merchants and artisans, from the *fringes* of the oriental empires.⁸⁸ It seems that their attempt to see through clashing religious worldviews and diverse cultural traditions not only brought them to posit *phusis* – the Way of Nature in itself – but also, immediately and inescapably, a political context for the possibility of this dangerously unorthodox contemplation.⁸⁹ The estranged outcast inquirers after nature also needed their own homeland and their own people but it would be a homeland of experimentation not of tradition, because "to think is to experiment" and so it would be a coming homeland, because "experimentation is always that which is in the process of

coming about – the new, remarkable, and interesting that replace the appearance of truth and are more demanding than it is.”⁹⁰

Most importantly, the imperial Persian invasion of mainland Greece uprooted even the Athenian Autochthon. A people who were already developing a free marketplace culture, a public space culture, based on their situation at the crossroads of key Mediterranean Sea trade routes, were uprooted from their own land to the extent that they were forced to reterritorialize themselves on the open sea. Water became their earth. They became the first colonialists in recorded history. The homeland of Philosophy has its inception in the Delian League that was formed to defeat the Persians, and did so chiefly in the naval Battle of Salamis.⁹¹ Within two centuries of the Persian invasion the Greeks had colonized not only the entire Persian Empire, including its easternmost reaches in northern India, but also the high civilization of ancient Egypt where the Ptolomies established a city that became the world’s first cosmopolitan melting pot: Alexandria. Deleuze sees the modern techno-worldwide development of global capitalism as a renaissance of the sea-faring international marketplace of the Greeks. The *North Atlantic Treaty Organization* (NATO) can be seen as a fractal repetition of the Delian League. When Deleuze suggests this world market can even extend “into the galaxy” after reaching the ends of the earth, he probably has in mind the Federation of *Star Trek* or the Rebel Alliance of *Star Wars*.⁹² Both are visions of “Greeks... strangely deformed in this mirror of the future.”⁹³ Both are Atlantean.

No Greek or Roman commoner could have imagined that a descendant of the Celtic barbarians would someday most definitively appropriate the persona of Ulysses.⁹⁴ There nonetheless came a time when the worst of these northern barbarians, wanted to identify themselves with the Greeks. With reference to Hölderlin’s vision of the retrieval of the Greek “society of friends”, Deleuze points out that this also meant that the Greeks were reterritorialized on the Germans, that in becoming Greek the Germans of the romantic period and of the 19th century (Goethe, Schiller, Schelling, Hölderlin, Nietzsche, etc.) – who have *thus far* established the most intimate relationship to the Greeks⁹⁵ – radically transformed “becoming-Greek” into something different than what the Greeks actually were as a matter of petrified historical fact.⁹⁶

Every culture that has hitherto adopted and adapted the metaphysical heritage of the Greeks has been on its way to becoming the Atlantean “people to come.” Atlantis – the Greece of Utopia that risks Dystopia – operates on the spectral level of the essence of Technology to determine the structure of Atlantic history as it has concretely manifested – the history of global capitalism and colonialism, but also of Soviet communism.⁹⁷ Perhaps the most catastrophically misguided foreign policy decision in history was the humiliation of Russia after the collapse of the Soviet Union. Instead of attempting to expand NATO through Eastern Europe up to the borders of Russia, while watching the people of Dostoyevsky and Tolstoy reduced to socioeconomic conditions comparable to those of a third world country, we ought to have invited the Russians into NATO first and offered them a ‘martial plan’ for economic recovery. Perhaps it is not too late to find a way to right the wrong that fostered the formation of the *Shanghai Cooperation Organization*. After all, at every moment in the development of Atlantic history, the present historical state of affairs is being nourished by an unhistorical or *untimely* “event” that is on its way – the arrival of “a new people and a new earth.”⁹⁸

The maritime colonial alliance forged at Delos became a new kind of empire – one that could potentially conquer the whole world through its oceans, but without subjugating it under a vertically oriented transcendental order.⁹⁹ Deleuze notes that in *The Crisis of European Sciences*, Edmund Husserl discusses the fact that all peoples, even the most tribally diverse and socially stratified, tend to identify themselves with a greater identity – for example the “India” that Aryans and Dravidians, Brahmins and Chandala all claim as their own. However, no people prior to the Europeans saw the whole world as potentially “European”, as in the process of increasing Europeanization – which means something other than the whole world becoming India or China.¹⁰⁰ Their national identities are still insular and dominated by tradition. By contrast to become ever more “European”, or more Greek, is to increasingly approximate the paragon of *humanitas*.¹⁰¹ “European” is not a national identity – this is why it was ultimately able to subsume the nation-states of Europe in a new sovereign order. The Greeks established the first imperial *milieu of immanence*, which conquers chiefly by seducing *others* to become party to its polity and to creatively transform it.¹⁰² Deleuze speaks of “European man whose privilege it is to constantly ‘Europeanize,’ as the Greeks ‘Greekized,’ that is to say

to go beyond the limits of other cultures that are preserved as psychosocial types” – which implies that Hellenization is occurring through ideas or archetypes that are *not* merely psychological types of one particular society¹⁰³ – namely, those of Prometheus and Atlas. There is no reason why this process should stop at the continental borders of Europe or North America. Various European peoples who trace their common heritage to Hellas were savages far more foreign to the Greeks than, for example, the Japanese are to the modern West. The *Atlantic Alliance* is both Greek and the larval form of the first world government. It should not be understood as a narrow geographic reference to the ‘Atlantic’, but in terms of Atlas – the world sovereign of Atlantis. So-called ‘Western’ Civilization should be redefined as *Atlantic Civilization* or, more colloquially, as Atlantis.

In his landmark study, *The Clash of Civilizations and the Remaking of World Order*, Samuel Huntington rightly recognizes that the very concept of a “universal civilization” is a unique product of Western Civilization.¹⁰⁴ In 1800, through their colonial empires Europeans controlled 35 percent of the earth’s land surface. This increased to 67 percent in 1878 and peaked at 84 percent in 1914 – the year that the World War began. In 1900 about 30 percent of the world’s population were Westerners, and by 1920 Western colonial government’s ruled over 48 percent of the world’s population. When Woodrow Wilson, Lloyd George, and Georges Clemenceau conferred at the Paris Conference in 1919, between them they controlled the entire world – carving up their colonial realms and lands conquered in World War I into artificial countries of their own design. They even had the capacity to extract economic concessions from China and to militarily intervene in Russia, which was in a state of chaos only a few years into the Revolution in part stirred up by wartime privation.¹⁰⁵ The League of Nations that emerged from out of that conference could really have become a world government that established Western Civilization as the universal civilization of Earth. By the end of the 20th century, Westerners made up no more than 13 percent of humanity, putting them in fourth place behind Chinese, Islamic, and Hindu civilizations, and Western governments no longer ruled over any significant populations other than their own.¹⁰⁶ Whereas the international system of the colonial era was also an international *society* insofar as it emerged from out of the shared European culture of its chief actors, the present multi-civilizational international system is not.¹⁰⁷ NATO is closer to being that.

In their Fall 2006 article for *Foreign Affairs*, entitled “Global NATO”, Ivo Daadler and James Goldgeier argue that Articles 6 and 10 of the North Atlantic Treaty should be abrogated. Through antiterrorism, peacekeeping, humanitarian aid and relief operations, NATO is already acting on a global scale beyond its North Atlantic mandate and could only benefit from admitting militarily capable non-European countries that share the liberal ideals of the alliance. The United States already guarantees the security of some of these nations. I suggest that the “Atlantic” of the Alliance (unqualified by “North”) should be understood *not* as a geographical designator, but as a reference to *Atlas*. Redefining ‘Western Civilization’ as a cosmopolitan Atlantic Civilization allows us to accommodate the globalization of the Alliance that Daadler and Goldgeier want to see. It also addresses Huntington’s concern that we affirm some civilizational identity as the basis for economic and political integration of its members. This integration should not, however, aim at Huntington’s ethnically ‘European’ transatlantic super-state, but at a cosmopolitan commonwealth of all those peoples with an Atlantean ethos.

According to Huntington, Marxism and every other significant political ideology – including liberalism, anarchism, corporatism, social democracy, conservatism, nationalism, and fascism – are products of Western civilization. By contrast, he claims that the West has never produced a major religion and its ‘own’ religions are imports from non-Western cultures. This is very significant insofar as the era of political ideology is now over and the clash of civilizations that is to replace it will be primarily driven by religious cultures.¹⁰⁸ I have, of course, throughout this work been arguing that there is a Western or Atlantic spirituality latent in the worldwide development of technological science, one that reaches back to the archaic Greek archetypes of Prometheus and Atlas. Our becoming conscious of this and affirming it might have the same consequences as the rise of other world religions did for the civilizations that gave birth to them. In the Arabian case, cultural revitalization was followed by a period of explosive expansion.

Actually, it is not so much a question of the birth of a new religion as of a dialectical transformation of our extant religious orientation through an understanding of the spectral essence of Technoscience. A parallel to the Greek mythos of Atlantis also lies at the basis of that other fount of Atlantic Civilization, namely the Hebraic mythology of Israel. The mythic memory that there was a war amongst the gods over an

attempt to seed a godlike terrestrial civilization is not limited to the ancient Greeks. It is found in many different cultures, and plays an especially prominent role in Judeo-Christianity and Islam – with the exception that the other gods besides the chief god, Jehovah, are referred to as “angels” of the Lord and those who rise in rebellion against him as “fallen angels.” The Hebrew word *elohim* is the plural of *el* and its translation as ‘God’ in the Old Testament is terribly misleading. It means “the gods”, so that “the gods made man in *their* image”, “the gods planted a garden in Eden”, and Enoch “walked with the gods.” The word *elohim* is derived from *ellu*, which means “the shining.” So the gods of the Old Testament are literally “The Shining Ones.”¹⁰⁹ Jehovah is the chief of the Shining gods, and the “Watchers” of Genesis 6 and *The Book of Enoch* are rebel gods – the “fallen angels” of Christianity and Islam – who descend to Earth at Mount Hermon to sire a titanic race of hybrids and establish a worldwide civilization, the “Atlantis” of Plato, where heavenly knowledge is put to the profane use of improving the lot of humans so that they can stop being lorded over by the gods led by the tyrannical Jehovah.

The first opposition to the Lord comes in the form of the Serpent in the Garden of Eden, who tempts Adam and Eve to leave a state of ignorance and blindness and to gain wisdom from the Tree of Knowledge so that they may become like divine beings. It is very clearly stated in Genesis 3 that the gods (*elohim*) expel humans from the garden of the gods at Eden so that they will not also eat of the Tree of Life and become, not only wise, but as immortal as the gods. The motivation is vengeance for mankind having rejected its status of enforced ignorance, and a covetous jealousy that seeks to keep humans in a position of servitude despite the knowledge gained as a result of defying the gods’ attempt to keep them blind. Then, shortly thereafter, we have the extraordinary passages on the flood of Noah from Genesis 5:21–27 and 6:1–17. Something seems to be missing here. In only a few lines the Bible tells us that the Lord has suddenly decided to wipe out the entirety of Creation? What are these evil acts that have supposedly consumed humanity and that constitute a defiance of divine laws? Should not more have been said about them, *especially given the fact that it is admitted that they began to take place after gods came down and interbred with humans?* Well, as it turns out more was said, but it was excised from the Bible as many other parts of it were over time.

The text is known as the *Book of Enoch*,¹¹⁰ which is why the aforementioned passages from Genesis relate how Enoch “walked with god”. What that means is made clear in the *Book of Enoch*, where this prophet is taken up and away into the heavens in one of the chariots of the Lord and is shown apocalyptic scenes of the future judgment of the world. The account of the Book of Enoch very closely parallels Plato’s story of Atlantis. It details the rise of a hybrid civilization of demigods on the Earth, except that in this case – instead of slowly being corrupted over time, it is made clear that the gods who bred with mortal women were an army of angels that revolt against the Lord and attempt to enlighten humans by teaching them all kinds of Promethean arts and sciences. This especially improves the lot of women, whose innate psychical superiority to men is cultivated to turn them into powerful sorceresses, and who are taught both methods of birth control and of abortion so that they can take pleasure in sex as they wish and with whom they wish. It is probably with a view to this antediluvian liberation of women that the Bible specifically targets *female* practice of the occult arts in that famous injunction at Exodus 22:17 that was used by those in Europe and America who burned witches at the stake for centuries: “Thou shalt not suffer a sorceress to live.” (Exodus 22:17)

There is a war between the hybrid human civilization that the rebel angels spawn and the army of the Lord, and these Giants lose. Their civilization is wiped out in a worldwide deluge and the fallen angels themselves are bound to remain incarcerated beneath the Earth. Later in European history, Milton develops this theme of war between God and the rebel leader Lucifer in *Paradise Lost*. The one actual mention of the war amongst the gods in the Bible itself is at Revelation 12: 7–9: “And there was war in heaven: Michael and his angels fought against the dragon; and the dragon fought and his angels, And prevailed not; neither was their place found any more in heaven. And the great dragon was cast out, that old serpent, called the Devil and Satan, which deceiveth the whole world: he was cast out into the earth, and his angels were cast out with him.”

Once humanity builds itself back up again after the Flood, what seems to be a *cosmopolitan* civilization – an urban culture with a single world language – undertakes a project to build something like a tower by means of which they will be able to ascend to the heavens. The Lord is once again afraid and jealous of their progress and decides to destroy this unified human civilization, scatter its survivors, and set them against each

other. The implicit admission that prior to this destruction the people of Earth had attained a common language calls to mind Crease's comparison of the universalizing of the metric system, an epitome of Atlas at work, to the linguistic unification of all peoples. Here are the passages on the Tower of Babel from Genesis 11:1–9:

Everyone on earth had the same language and the same words... And they said, "Come, let us build us a city, and a tower with its top in the sky, to make a name for ourselves; else we shall be scattered all over the world." The Lord came down to look at the city and tower that man had built, and the Lord said, "If, as one people with one language for all, this is how they have begun to act, then nothing that they may propose to do will be out of their reach. Let us, then, go down and confound their speech there, so that they shall not understand one another's speech." Thus the Lord scattered them from there over the face of the whole earth; and they stopped building the city. That is why it was called Babel, because there the Lord confounded the speech of the whole earth; and from there the Lord scattered them over the face of the whole earth."

Chapter 8. The Titanic Religiosity of Radical Empiricism

Prometheus and Atlas, as the conceptual personae of technoscience, afford us a radically empiricist understanding of what were once taken to be ‘miraculous’ occurrences that bedazzled people into submitting to the will of a Heavenly Lord who used them to fallaciously claim to be omnipotent and omniscient, to claim in effect that: resistance is futile. Through their titanic rebellion, Prometheus and Atlas put the lie to His threats. Zeus, or Jehovah, has been cut down to size as the petty dictator that he is.

William James, one of the great philosophers of religion in our time, led the American branch of the Society for Psychical Research (SPR) and was convinced that study of the paranormal would lead to the next great scientific revolution, ushering in a radical empiricism unconditioned by mechanistic metaphysics. He also saw the paranormal as confirming his pluralistic ontology, including its most important ethical implication: that since Nature is incomplete, forever open to addition and revision, we co-constitute it through our personal intentions and creative acts. This also means that there are real tragedies in life, which could have been averted if only we had done otherwise, rather than the farce that every tragedy becomes when it is seen as an actualization of one of the predetermined possibilities always already surveyed by an all-knowing God.

James interpreted Religion in light of his radical empiricism and his pluralistic ontology, arriving at the conclusion that many of the miraculous occurrences recounted in scripture are on a continuum with more contemporary cases of mediumistic trances, telepathic communications, psychokinetic demonstrations, and other such manifestations that he studied during his years as a pioneering parapsychologist at the SPR. I draw a comparison between one particular case of telepathy that James wrote about and the mediumistic ‘revelation’ of the *Quran* to the ‘prophet’ Muhammad. I then go on to discuss James’ view that a truly radical empiricism cannot avoid admitting the possibility that superhuman beings in the Cosmos may be the sources of such communications, but that from the standpoint of pluralistic ontology they are finite and fallible beings such as

ourselves – whatever else they may mumble through our mouths to their own benefit, and however much their superior powers might impress us. Still, James does not remain entirely consistent with this revolutionary insight. I examine key passages from the *Quran* to demonstrate that this ‘revealed’ scripture is a constitutional legal text that founds a totalitarian political regime, and an excellent example of the fact that revealed religion does not predominately consist of the ‘mere belief’ of individuals. In the end, there are passages where James admits that some messages telepathically channeled from various superhuman entities in the Cosmos may be as destructive of life as others are inspirational, so that our own ethical standards should be the final arbiters of their worth.

James recognizes that even after the coming psychical revolution in Science collapses the barrier between Science and Religion, the “infinite demand of the sacred” that lies at the core of religion “will always drive irreligion” to the wall on the “battlefield” wherein fundamental human ideals combat one another. Like Heidegger, he thinks that any philosopher without such sacred ideals is engaged in ‘mere philosophy’ that will be of no consequence in “the concrete emergency.” In a turn of phrase that Nietzsche would certainly have appreciated, James refers to his own religiosity as the spirit of “the alpine eagle.” Although I end up agreeing with him that “the infinite demand of the sacred” is pragmatically, or to put it in Heideggerian terms *existentially*, indispensable – I insist that the only sacred ideal consistent with his radical empiricism and pluralistic ontology is that of Prometheus and Atlas, titanic brothers and comrades who need one another and still have only a fighting chance to prevail in “the [Heraclitean] game of existence.”

8.1 The Radical Empiricism of Responsible and Self-Reliant Individuals

In his chapter on “Religion” in *Pragmatism*, James frames the question of choosing between the alternatives of the monistic and pluralistic worldviews as “the final question of philosophy” and “the deepest and most pregnant question that our minds can frame.”¹ Remaining neutral with respect to these two alternatives, and keeping this momentous question open indefinitely, is not an option. There is, rather, an urgent “pragmatistic need... of frankly adopting either”.² James recognizes that the conflict between pluralism and monism really hinges on whether or not there are genuine

possibilities in life.³ Both Rationalism and religious faith in an omniscient and omnipotent God assert that everything ‘good’ (read: what should happen) certainly does happen, and anything ‘evil’ (read: what should not happen) never really does happen. James takes the thought of Hegel to be the greatest expression of this view. Hegel does not disregard the destructive change that things undergo on account of an inability to assert themselves as fixed and independent of what is in their environment. Rather, the Hegelian dialectic subsumes this transformation through friction and opposition into a merely *apparent* temporal process taking place within an eternally completed Whole to which “there is no imaginable...outlying alternative”.⁴ Everything was, is, and will be as it is supposed to be – no matter what: “Whatever the details of experience may prove to be, *after the fact of them* the absolute will adopt them... *That*, whatever it may be, will have been in point of fact the sort of world which the absolute was pleased to offer to itself as a spectacle.”⁵

Meanwhile, those who subscribe to the pluralistic empiricist variety of religion believe it is possible that things will not turn out as they should; whether or not they do is, at least partly, up to us. Any genuine possibility requires certain concrete conditions for its actualization, some of which may not in fact be in place. James explains this in terms of the example of “a concretely possible chicken”, the actualization of whose self-consistent idea needs not only an actual egg, but the absence of a threat to this egg from any number of sources. He suggests applying the same notion to the idea of the salvation of the world.⁶ This is not a possibility in the face of which one can be legitimately or believably neutral. James proposes that there is a middle way between a pessimism that denies outright the possibility of the world’s salvation, and an optimism that takes it to be inevitable. He calls this middle way the doctrine or attitude of *meliorism*, according to which the salvation of the world is a genuine possibility, one whose probability increases or decreases depending on how many of the concrete conditions for the actualization of this possibility materialize. According to James: “It is clear that pragmatism must incline towards meliorism.”⁷ He opposes “pluralistic pragmatism” to rationalism in such a way that “pluralistic” adjectivally describes “pragmatism” rather than indicating a species of the genus pragmatism-in-general.⁸

James elaborates the melioristic view by presenting an idea that he later develops at length in *A Pluralistic Universe*. It is the view that there are causal gaps in the universe, moments of opportunity, which are only filled in by our chosen actions. Beings such as ourselves contribute integrally to the growth of the universe. Each of us makes things happen that never would have happened but for our creative act to make it so. James refers to our sphere of action as “the workshop of being” – a wonderfully Promethean image. We co-constitute existence, which, consequently, is finite and relativistic. “New being comes in local spots and patches”, in other words “piecemeal”, and these concentrations of existence are not necessarily harmoniously integrated with what already exists.⁹ Again, the discontinuities, or “gaps” are what allow for our actions to make a fundamental difference. In other words, one can expect events that defy so-called ‘laws of nature’ (which are really no more than approximate generalizations), and moreover, on this view, some of those events will manifest the way in which we, conscious beings, occasionally play a role in constituting ‘physical reality’.¹⁰

James repeatedly refers to this fundamentally pluralistic universe as “irrational” when viewed from the traditional perspective.¹¹ Although, in a polemically provocative spirit, James occasionally embraces the label of “irrationalist”, his more serious response to this charge of irrationality is that it is based on a false ideal of rationality and reasons. *Living reason* is not that of abstractions such as logic, necessity, and categories. The only *real reason* something should come into being in the course of human events is that “someone wishes it to be here”.¹² To expect that the universe should somehow “make sense” in itself, as if isolated from human actions that shape *our* world of meaning, is a false expectation – and so horror in the face of an illogical or insane universe is misplaced. The abyssal lack of an inherent and immutable order can be seen as the free space for *us* to *make* the world meaningful in one way or another.

In his chapter on “Hegel and his Method” in *A Pluralistic Universe*, James offers a different critique of rationalism. There he suggests that there are four dimensions of rationality, with the intellectual being only one of them. Things can also be rational or irrational in an aesthetic, moral, or practical sense. The “world of mechanical materialism” may be the most rational world *intellectually*, but it makes nonsense out of aesthetic, moral, and practical experience. The monistic worldview is irrational even

intellectually, since it contradicts its own demand that the whole be perfect whereas the parts of this whole are imperfect. A truly rational view is one that is most rational *on balance* in all four dimensions of human experience.¹³ James thinks that his pluralism passes this test.

On the pluralistic view, one can imagine that while the salvation of the universe (i.e. attaining the best possible outcome for those concerned) may be possible, it is a very risky affair to participate in such a universe – because success or failure is partly up to us, and there is a lot to lose.¹⁴ Perhaps it is even more risky, psychologically, than if one were to dismiss the possibility of “salvation” altogether, in which case one has nothing to lose. It demands much more trust of others, because all we really have in the end are each other, and even if there are gods, they also are finite others with limited power.¹⁵ This redeems human *creativity* as a genuine phenomenon, an ability to introduce novelties into a world that is *not* completed in an eternity beyond time.¹⁶ There may be gods, but nothing all-powerful capable of guaranteeing any particular outcome in advance.¹⁷ James takes the radically *humanist* view that: “The world stands really malleable, waiting to receive its *final* touches at *our* hands.”¹⁸

James believes that, if given the choice between this and nothingness, most people would choose to participate in this humanistic “universe with only a fighting chance of safety.”¹⁹ There are, however, religious persons of another type, who are “reduced to their last sick extremity” and do not have the strength of character or the moral courage to accept this risk. They need to psychologically secure themselves against the possibility of accidents, against the possibility of failure, in a word, against the possibility of real possibilities. James writes, with strikingly decisive force: “Nirvana means safety from this everlasting round of adventures... The hindoo and the Buddhist, for this is essentially their attitude, are simply afraid, afraid of more experience, afraid of life.”²⁰

8.2 A More Radically Empiricist Reading of Revelation

James explicitly sets his attempt to interpret Religion “pragmatically” against the Transcendentalism of Kant. As we saw in Chapter 2, Kant’s *Religion Within the Limits of Reason Alone* epitomizes the fearful refusal to reckon with the paranormal substrate of religious experience.²¹ Transcendental idealists, like Kant, merely offer an *ideal*

interpretation of the *same* world of facts acknowledged by materialist scientists (in Kant's own time, persons such as Julien Offray de La Mettrie). On this view, "ideal entities" cannot ever interfere causally in the course of events in the "phenomenal" realm. Ideal things in themselves (what Kant called *noumena*) are *apriori* parallel to perceived phenomena as they appear according to a closed nexus of efficient causality that is pre-consciously determined by the cognitive apparatus of the perceiver.²² No individual act is free or creative by contrast with other natural happenings. The will can only lie behind everything, and no thing in particular. James calls this a refined, universalistic supernaturalism that turns Theology into a study of the (subjective) meanings of (objective) material facts.

In opposition to this, James affirms the causal efficacy of the will and the intrusion of irregular events *within* the world of phenomena, i.e. the "crass... miracles" of the "older theology".²³ James' basic objection is that rationalistic philosophies of religion do not realize that the "world interpreted religiously is not the materialistic world over again," rather "it must have, over and above the altered expression, *a natural constitution* different at some point from that which a materialistic world would have. It must be such that different events can be expected in it..."²⁴ James insists that religion does make claims about the *facts* of the world, and that it should be empirically evaluated on this basis.²⁵

James acknowledges that, interpreted pragmatically, religion is "largely based" upon events of "revelation" and he suggests that certain scriptures may have been "composed automatically", in other words by means of the kind of *automatic writing* prevalent among late 19th century trance mediums that he studied in the course of his quarter century of empirical research into psychic phenomena.²⁶ Most relevant among these is the case of Albert Le Baron, whose experiences were studied by William James and other members of the *Society for Psychical Research* in 1896.²⁷ The particularities of Le Baron's experiences are very similar to those involved in the 'revelation' of the *Quran* to the 'prophet' Muhammad in a state of mediumistic trance. (*Quran* 5:101-103; 10:15-17; 11:13-14; 75:19-20)

Le Baron experienced episodes of "psychic automatism", i.e. the involuntary movement of his mouth and hands to utter or write out messages that seemed to come

from some source other than himself, or at least, other than his conscious mind. As in the case of Muhammad, his initially skeptical and distrustful attitude towards these manifestations was eroded by repeated attempts of certain religiously indoctrinated and impassioned women around him to convince him that he was being addressed by a divine being.²⁸ Also as in the case of the prophet of Islam, the receiver could not necessarily remember the message after it was transmitted. At one point in the *Quran*, there is a break in the ‘revelation’ as if it were a ‘mental radio’ transmission being interrupted for a word from the station, directly from Allah to Muhammad, telling him that he need not try to memorize the words as they come, because they will be rebroadcast to him if and when he again requires them. (*Quran*, 75:19-20) Le Baron’s source of ‘revelation’ speaks of Le Baron in the third person, just as Allah speaks of Muhammad through his mouth. (*Quran*, 80:1-16; 81:22) While the messages did at times contain information that Le Baron was not consciously aware of, and could not have obtained by sensory means, he recognized that the prolific deific rhetorical flourishes were often as devoid of meaningful content as they were poetically expressed.

The source of the ‘revelations’ attempted to convince Le Baron that he was a prophet and it commanded him to undertake long journeys, of the kind that Muhammad also undertook during the course of his own career, to various locations where significant events were promised to take place or further revelations were to be forthcoming. These began with a command to travel to the village of Stowe, Vermont (unheard of at that time by Le Baron) and ended with absurdities, such as the demand that he seek out the Emperor of China. One is reminded of the emissaries that Muhammad sent to deliver ultimatums to the Emperor of Persia. Le Baron’s mediumistic “control” also provoked feelings of abject submission in him, as if he were being asked to surrender himself as something lower than dirt and to empty himself out and become a ‘pure’ vessel for divine commands. The parallels to the Mohammedan spirit go without saying.

Fortunately, unlike Muhammad, Albert Le Baron was an intellectual given to reading Kant’s *Critique of Pure Reason* in his spare time, and so he eventually concluded that he might well be subject to telepathic manipulation “from some... awfully naughty source”, which ought to be evaluated scientifically so that its operative psychological laws could be discovered.²⁹ For this, he turned to the *Society for Psychical Research*. Le

Baron rightly suspected that the faculty at work here is likely the same as that responsible for successful controlled experiments at the SPR on the extrasensory transference of thoughts and symbolic images, the protocols of which William James helped to design, and the results of which he reports on in his 1895 paper on “Telepathy”.³⁰ James explicitly draws this connection when, in this paper, he claims that the Society’s tests on the renowned medium, Mrs. Piper, were among the most impressively verified displays of telepathic ability – *so* impressive that James describes himself “as convinced of the reality of the phenomenon in her as he can be convinced of anything in the world.”³¹

In *Pragmatism*, James considers that the sources of such ‘revelations’ as those conferred to Le Baron – or Muhammad – may be superhuman beings, but these are finite and fallible entities within our pluralistic universe; we stand in a similar relation to them as the non-human animals that we interact with stand in relation to us:

I firmly disbelieve, myself, that our human experience is the highest form of experience extant in the universe. I believe rather that we stand in much the same relation to the whole of the universe as our canine and feline pets do to the whole of human life. They inhabit our drawing-rooms and libraries. They take part in scenes of whose significance they have no inkling... But, just as many of the dog’s and cat’s ideals coincide with our ideals, and the dogs and cats have daily living proof of the fact, so we may well believe, on the proof that religious experience affords, that higher powers exist and are at work to save the world on ideal lines similar to our own.³²

Of course, just as not all people who interact with animals are pet owners – some are unethical scientists – and just as even some pet owners leave much to be desired in their treatment of their animals, James’ view here leaves open the possibility that some of the superhuman beings in the universe are, from the perspective of our own interests, either terrifyingly indifferent or malevolently threatening influences on earthly affairs.

Yet at other times James loses sight of the fact that Religion is the most socio-politically binding phenomenon and that it is not limited to “the feelings, acts, and experiences of individual men in their solitude, so far as they apprehend themselves to stand in relation to whatever they may consider the divine.”³³ He remarks that he could “escape much controversial matter by this arbitrary definition” and indeed, he does, but at

the cost of maintaining his pragmatic, radically empiricist stance with respect to the subject at hand. Whether or not it is the case that “for each man to stay in his own experience, whatever it be, and for others to tolerate him there, is surely best”³⁴ that is almost the *opposite* of how it stands empirically with ‘revealed’ Religion.

Nowhere is this more apparent than in the case of Islam, the most current and – by its own lights – most uncontaminated and pristine ‘revealed’ religion. In verses 6:114-116; 10:15; 10:65; 43:2; 85:21-22; 43:2; 85:21-22; 86:12-14, 2:174-177, the *Quran* takes great pains to make clear that its injunctions are perfect, eternally valid, and are to be obeyed without any alteration; a perfect and complete guide to life that should be followed over the opinions of the majority of people in the world. Verse 2:85 makes it perfectly clear that you cannot pick what parts of it you believe in. At 3:6-7, it is stated that the literal verses of the Quran (such as the legal ones) are its foundation; they are separate from the allegorical passages, and are not to be interpreted metaphorically or modified thereby. 5:44-45 demands either forgiveness of a crime by its victim or strict adherence to Islamic laws. 2:194 establishes the law of *talion* – eye for an eye, commensurate justice. 5:38 establishes amputation (cutting off hands) as the Islamic punishment for theft. 4:34 permits men to beat those of their wives from whom they fear disobedience. 4:16 states that men are allowed many wives and slave girls captured in battle, but a woman who sleeps with any other man than her husband is put under house-arrest until death. In 2:223 we see that a woman does not have a right to refuse a man sex when he wants it, which highlights the fact that a woman’s sexuality belongs to her husband. Women can only inherit half of the property that men do (4:11), and in court the testimony of any woman is worth half that of a man, because she is supposedly feeble-minded. (2:82) Finally, the *Quran* not only constitutes a political state, it establishes a basic economic policy. In 16:71,75 God forbids socialism; he favors maintaining the economic inequality of rich and poor. Religious revelation is not primarily about “the interest of the individual in his private personal destiny”.³⁵

8.3 ‘Religious Experience’ as a Subject Matter of Scientific Research

The scientific validation of psychic phenomena does not allow us to simply tolerate revealed Religion as if it were ‘mere belief’. There is no such thing as a *mere*

belief – especially when it involves passionately motivated *collectives* that build mass cults; intentions, whether conscious thoughts or subconscious desires, can have immediate *physical* consequences for the wellbeing of others.

A scientifically minded awareness of the potential for nefarious psychical manipulation on the part of powerful beings in the cosmos who are purporting to be a source of ‘revelation’ goes all the way back to William James. Despite a central thesis of *The Varieties of Religious Experience*, James acknowledges that mystical states are not always saving experiences through which a healthy minded person is fortified against a loss of spiritual equanimity and a “sick soul” is afforded a resolution to psychological uneasiness or personal suffering by the strength of a “higher” part of his Self, a subliminal Self that is wider than his self-conscious ego but also continuous with it.³⁶ Rather, James acknowledges that there are “*diabolical*... lower mysticisms” that “spring from the same mental level, from that great subliminal or transmarginal region of which science is beginning to admit the existence, but of which so little is really known.”³⁷ These also feature “texts and words coming with new meanings, the same voices and visions and leadings and missions, the same controlling by extraneous powers; only this time...instead of consolations we have desolations; the meanings are dreadful; and the powers are enemies to life.”³⁸ James claims that, even within the traditional sphere of religious belief, any paranormal occurrence might be of ‘diabolical’ rather than ‘angelic’ origin.³⁹ So in the final analysis, a religious revelation must be judged on ethical grounds. At the conclusion of the *Varieties* chapter on “Conversion”, James writes: “If the *fruits for life* of the state of conversion are good, we ought to idealize and venerate it, even though it be a piece of natural psychology; if not, we ought to make short work with it, no matter what supernatural being may have infused it.”⁴⁰ The contrast between “natural psychology” and “supernatural being” in this passage clearly suggests that the last line means that even if there *were* an empirically verifiable God, we should not obey him if he is unethical. This collapses the moral dimension of “religious experience” to radically secular (but non-materialistic) criteria of ethical evaluation. Meanwhile, the study of the *facts* of religious experience can, in principle, become the object of a Science that has moved beyond the narrow paradigm of materialist reductionism. What James loosely

refers to as “supernatural” would then only be an aspect of Nature that is not yet understood, as Schelling and Bergson took it to be.

There are a few instances in *Varieties* where James makes an exception to the opposition he sets up there between impersonal Science and personal Religion. In one significant footnote that alludes to his own psychical research, James criticizes advocates of scientism for being unscientific in their rejection of the “mass of raw fact” that paranormal occurrences represent, and he speculates that phenomena of extrasensory perception such as “prophecy” or psychokinetic abilities such as “levitation”, that are traditionally associated with Religion, might eventually be admitted into a new scientific paradigm that is not “impersonal”, in the sense that it would allow for the personal intentions of conscious beings to play a constitutive role in nature:

Even the errors of fact may possibly turn out not to be as wholesale as the scientist assumes... ‘Experience of fact’ is a field with so many things in it that the sectarian scientist, methodically declining, as he does, to recognize such ‘facts’ as mind-curers and others like them experience, otherwise than by such rude heads of classification as ‘bosh’, ‘rot’, ‘folly’, certainly leaves out a mass of raw fact... No one can foresee just how far this legitimation of occultist phenomena under newly found scientist titles may proceed – even ‘prophecy’, even ‘levitation,’ might creep into the pale. Thus the divorce between scientist facts and religious facts may not necessarily be as eternal as it at first sight seems... just as any path of progress may follow a spiral rather than a straight line... the rigorously impersonal view of science might one day appear as having been a temporarily useful eccentricity rather than the definitively triumphant position which the sectarian scientist at present so confidently announces it to be.⁴¹

In his 1909 essay “Final Impressions of a Psychical Researcher”, James goes even further on this point, committing himself to the view that honest empirical study of such phenomena traditionally associated with “religion” will lead to the next great scientific revolution:

I find myself believing that there is "something in" these never ending reports... although I haven't yet the least positive notion of the something. It becomes to my mind simply a very worthy problem for investigation.⁴²
...The first difference between the psychical researcher and the inexpert person is that the former realizes the commonness and typicality of the

phenomenon here, while the latter, less informed, thinks it so rare as to be unworthy of attention. *I wish to go on record for the commonness.*⁴³ ...when was not the science of the future stirred to its conquering activities by the little rebellious exceptions to the science of the present? Hardly, as yet, has the surface of the facts called "psychic" begun to be scratched for scientific purposes. It is through following these facts, I am persuaded, that the greatest scientific conquests of the coming generation will be achieved.⁴⁴

It would be a revolution wherein scientists recognized that, for utility's sake, we read mathematics into space and time, covering over our uneven experiences of places and our durational sense of Time.⁴⁵ The technological control of nature to which Science aspires would then no longer threaten to alienate us from the fundamental human experience in which scientific research is rooted, and the live possibilities of which it is the proper purpose of Science to enrich.⁴⁶ In his 1896 "Address of the President [of the Society for Psychical Research]" James speaks of the coming revolutionary re-personalization of Science, which will be provoked by the understanding of psychic phenomena and which promises to render scientific research genuinely "empirical" in the sense of being faithful to human *experience* (*emperia*) unfiltered by prejudicing beliefs (whether of the traditional or apriori type).⁴⁷

At another point in *Varieties*, James suggests that absent what he vaguely refers to as "religious feeling", animistic interpretations of nature would have gradually yielded to scientific ones and all that would have remained valid of animistic 'religion' (and its associated practices of "sympathetic magic") would be the kinds of phenomena *scientifically* studied in psychical research. He claims that our materialistic science will also probably have to re-admit these phenomena as well, reaching the same point of completion (in method and epistemological structure, though not necessarily in content) as the counterfactual science of a world without "religious feeling".⁴⁸ If this "religious feeling" is the consoling psychological state of cosmic safety then, as we saw above, James himself admits that this is not *always* the only kind of "religious" feeling; its opposite, Gnostic horror in the face of an 'evil' Cosmos, is just as "religious". So what residue of religion is there that could forever elude the future "scientific conquests" of a Psychology freed from neurological reductionism? On what grounds does James claim

that “on the battle-field of human history” it will always be the case that “religion will drive irreligion to the wall”?⁴⁹

In his essay on “The Moral Philosopher and Moral Life” in *The Will to Believe*, James draws a contrast between the *strenuous* and *easy-going* moods and identifies their divergence as the “deepest difference, practically, in the moral life of man.”⁵⁰ James’ idea of the “strenuous mood” is essentially the capacity to sacrifice present comforts for a higher purpose, to take the more challenging path less traveled in passionate pursuit of all that is great – such as beautiful, noble, and awe-inspiring ideals of “justice, truth, or freedom” – while contemptuously casting aside petty “lesser claims” and even cruelly going to battle with those that refuse to die away by simply being ignored.⁵¹ The strenuously spirited person refuses the easy-going attitude that “it’s all good” or at any rate, that things are as they had to be; he is capable of indignation at things that are not as they *should* have been or as they *could* be.⁵² In other words, the sense of the “tragically challenging” has to be alive in the strenuous person.⁵³ But is faith in a God who knows and wills all, really compatible with *the tragic sense of life*? Are the crucifixion of Jesus or the exile of Muhammad from Mecca really tragedies – in the *Greek* sense of tragedy that Nietzsche reawakened? No, absolutely not. They are supposed to have been the work of God, and not the potentially futile – and therefore *really* perilous – sacrifices of great men or gods finite enough to really suffer.

Of course, as we have seen, in later works such as *Pragmatism*, *Varieties of Religious Experience*, and *A Pluralistic Universe*, James clearly wants to reject the idea of an omniscient and omnipotent God. One of his most central concerns in “The Philosopher and Moral Life” is to argue that codes of ethics “never can be *final*” because genuinely ethical behavior requires rule-breaking to accommodate the actual case, and there would be no true moral dilemmas if adequate rules to address them were readily available.⁵⁴ If, together with James, we wish to reject *both* defining ideas of religious revelation, namely that of an all-powerful omniscient Lord *and* that of the eternal infallibility of His revealed moral code, why then should we continue to talk in terms of ‘God’ at all, rather than simply of *the sacred* or that context of meaning which is affirmed more unquestionably than all that it alone makes possible?

James may be right that “in a merely human world without a god, the appeal to our moral energy falls short of its maximal stimulating power.”⁵⁵ However, this does *not* necessarily force us to acquiesce in the permanent survival of religious faith in the one true God. Rather, it can be taken as a Nietzschean call to overcome the “merely human” and to become god-like beings ourselves by way of cleansing our hands of the blood of a Tyrant that we have murdered with the scalpels of Gay Science.⁵⁶ For Nietzsche, the project of developing a non-mechanistic Science of the future is one and the same project as cultivating a spiritual aristocracy of post-human supermen.⁵⁷ When James claims of the strenuous mood that “a world where all the mountains are brought down and all the valleys are exalted is no congenial place for its habitation”,⁵⁸ he seems to forget that the metaphor of flattening mountains and valleys into a uniform ‘salt of the Earth’ is just the humiliating end-game that the God of revealed religion claims to have in store for mankind. It is neither Jesus nor Muhammad, but Prometheus and Atlas who embody the spirit of James’ “alpine eagle” perched on the precipice.⁵⁹ These fraternal titans remind us that in the gravest battles – such as *the revolutionary war against the One True God* – even great heroes need each other. If, in “the [Heraclitean] game of existence” it is necessary for us to postulate “a god” only “as a pretext for living hard”,⁶⁰ then finite divinities with only a fighting chance are a more suitable sacred ideal. Nothing less is demanded of us than the perseverance of an Atlas, the daring of a Prometheus. Mankind is about to be *gifted* with a new world – but only if *we* can bear it, only if *we* can steal it.

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Chapter 5. The Specters of Technoscience

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Chapter 6. Prometheus, the Rebel Artisan of Life

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⁸² Deleuze, *What Is Philosophy?*, 108, 110.
⁸³ Ibid., 100, 112.
⁸⁴ Ibid., 270.
⁸⁵ Ibid., 267.
⁸⁶ Ibid., 96.
⁸⁷ Ibid., 109.
⁸⁸ Ibid., 87, 109.
⁸⁹ Ibid., 100.
⁹⁰ Ibid., 111.
⁹¹ Ibid., 88.
⁹² Ibid., 97.
⁹³ Ibid., 110.
⁹⁴ Ibid., 109.
⁹⁵ Ibid., 101–102.
⁹⁶ Ibid., 113.

⁹⁷ Ibid., 95, 98-99.

⁹⁸ Ibid., 96, 99, 101, 111.

⁹⁹ Ibid., 88.

¹⁰⁰ Ibid., 97-98.

¹⁰¹ Ibid., 97: “The European can, therefore, regard himself, as the Greek did, as not one psychosocial type among others but Man par excellence, and with much more expansive force and missionary zeal than the Greek.”

¹⁰² Ibid., 87.

¹⁰³ Ibid., 149.

¹⁰⁴ Samuel Huntington, *The Clash of Civilizations and the Remaking of World Order* (New York: Simon & Schuster, 1998), 66.

¹⁰⁵ Ibid., 91.

¹⁰⁶ Ibid., 84.

¹⁰⁷ Ibid., 54-55.

¹⁰⁸ Ibid., 53-54.

¹⁰⁹ Colin Wilson, *The Atlantis Blueprint* (New York: Random House, 2002), 196–197.

¹¹⁰ Richard Laurence [Translator] *The Book of Enoch the Prophet* (San Diego: Wizard’s Bookshelf, 1995).

Chapter 8. The Titanic Religiosity of Radical Empiricism

¹ William James, *Pragmatism and the Meaning of Truth* (Cambridge, MA: Harvard University Press, 1978), 140-141.

² Ibid., 141.

³ Ibid., 135.

⁴ William James, *A Pluralistic Universe* (University of Nebraska Press, 1996), 89-90; 102-103.

⁵ Ibid., 126.

⁶ Ibid., 136.

⁷ James, *Pragmatism and the Meaning of Truth*, 137.

⁸ Ibid., 125.

⁹ Ibid., 138-139.

¹⁰ Ibid., 60-61.

¹¹ Ibid., 138-139.

¹² Ibid., 138.

¹³ James, *A Pluralistic Universe*, 112-113; 123.

¹⁴ James, *Pragmatism and the Meaning of Truth*, 139.

¹⁵ Ibid., 139.

¹⁶ Ibid., 59.

¹⁷ Ibid., 135.

¹⁸ Ibid., 123, my emphasis.

¹⁹ Ibid., 140.

²⁰ Ibid.

²¹ Ibid., 402; 464.

²² William James, *Writings: 1902–1910* (New York: The Library of America, 1987), 389.

²³ Ibid., 464.

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- ²⁴ Ibid., 462-463.
- ²⁵ Ibid., 467.
- ²⁶ Ibid., 14; 402.
- ²⁷ William James, *Essays in Psychological Research* (Cambridge, MA: Harvard University Press, 1986), 143-165.
- ²⁸ Martin Lings, *Muhammad: His Life Based on the Earliest Sources* (Rochester, VT: Inner Traditions, 2006), 44-46.
- ²⁹ James, *Essays in Psychological Research*, 161, 163.
- ³⁰ Ibid., 120-121.
- ³¹ Ibid., 125.
- ³² James, *Pragmatism and the Meaning of Truth*, 143.
- ³³ James, *Writings: 1902–1910*, 36.
- ³⁴ Ibid., 438.
- ³⁵ Ibid., 439-440.
- ³⁶ James, *Writings: 1902–1910*, 454; 460.
- ³⁷ Ibid., 384.
- ³⁸ Ibid.
- ³⁹ Ibid., 223.
- ⁴⁰ Ibid., 219.
- ⁴¹ Ibid., 448-449.
- ⁴² James, *Pragmatism and the Meaning of Truth*, 796.
- ⁴³ William James, *The Writings of William James: A Comprehensive Edition* (Chicago: University of Chicago Press, 1977), 797.
- ⁴⁴ Ibid., 799.
- ⁴⁵ James, *Pragmatism and the Meaning of Truth*, 84; 87.
- ⁴⁶ Ibid., 91.
- ⁴⁷ James, *Essays in Psychological Research*, 136-137.
- ⁴⁸ James, *Writings: 1902–1910*, 388.
- ⁴⁹ William James, *The Will to Believe* (New York: Dover Publications, 1956), 213.
- ⁵⁰ Ibid., 211.
- ⁵¹ Ibid., 211; 213.
- ⁵² Ibid., 211.
- ⁵³ Ibid., 213.
- ⁵⁴ Ibid., 209-210.
- ⁵⁵ Ibid., 212.
- ⁵⁶ Friedrich Nietzsche, *The Gay Science* (New York: Vintage Books, 1974), 181.
- ⁵⁷ Ibid., 173; 334–336.
- ⁵⁸ James, *The Will to Believe*, 212.
- ⁵⁹ Ibid., 213.
- ⁶⁰ Ibid., 213-14; 178-179.

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