

Q LIGHTNING

William Mullen

*"Ils m'ont appelé l'Obscure et j'habitais l'éclat."*¹

Saint-John Perse

Five years after he won the 1988 Nobel Prize for his work on some very light and very fast things called neutrinos, Leon Lederman, at the ripe age of 71, delivered himself of a quote that has proved highly quotable: "My ambition is to live to see all of physics reduced to a formula so elegant and simple that it will fit easily on the front of a T-shirt." Fans of the quote have been quick to free it up from the condition that the very short

¹ The complete passage is as follows in the bilingual edition of Wallace Fowler
Plus que l'année appelée héliaque en ses milles

De millénaires ouverte, la Mer totale m'environne.

L'abîme infâme m'est délice et l'immersion divine

Ils m'ont appelé l'Obscure et j'habitais l'éclat.

[More than the Year called heliacal in its thousands and millions

Of milleniums, open, the total Sea encompasses me.

The infamous abyss is delight to me, and immersion, divine

They called me the Dark One and I dwelt in radiance.]

As Judith Kopenhagen-Urian (1999) points out, the passage quoted above ending in the sentence of Saint-John Perse which I have chosen for my epigraph contains not one but two references to Heraclitus. We learn from Cicero (*De Finibus Bonorum et Malorum* Chapter 2, Section 15) that Heraclitus had come in antiquity to be known as *Ho Skoteinos*, "the Dark", more commonly translated "the Obscure". The opening allusion to "the Year called heliacal" refers to Heraclitus' 10,800 year "Great Year" determined by the sun's solstices, in which each day is 30 years long (a human generation), and in which the winter solstice was the Deluge, in which everything is consumed by water (*kataklysmos*) and the summer solstice was the Conflagration, in which everything was consumed by fire (*ekpyrosis*).

thing on the T-shirt be a mathematical *formula*, which can be intimidating (how many of us feel we could give an adequate account of just what $e=mc^2$ means, much less why it is so important?). A sentence, or even a symbol, will do. But what should it be? And are we there yet?

Well, we have come to this Quantavolution conference to honor one of the great polymaths and most voluminous authors of our time, and we therefore delight to know that a good decade before Lederman's desideration Alfred de Grazia had come up with a reduction of his *scienza nuova* to a four word sentence, and that soon thereafter he did indeed proceed to put it on a T-shirt. Google "Alfred de Grazia" and on the home page of the first two entries, be it "Wikipedia" or "The Grazian Archives", you will see the same picture of him smiling benignly out at you and wearing a T-shirt on which you can read: "Lightning steers the universe". As a classicist I delight in Al's choice of Heraclitus' Fragment 64, for more reasons than I will be able to do justice to in this short talk. As one who has been working for years on an opus I tentatively entitled "Catastrophism and the Axial Age", I am especially delighted that the chosen sentence comes from one of the most renowned and provocative of any of the Axial Age thinkers from Greece to China. Indeed, it will be the implicit thesis of this talk that deGrazia could not have done better in his choice from the Axial Age.

My principle of selection in unpacking the multiple meanings of this "radiantly obscure" utterance will be to show three facets of quantavolution it reveals— as it were, in a flash.

First, I will muse on the grammatical and rhetorical form of the utterance, arguing that, like quantavolution, Heraclitus' four words (in Greek as in English) are meant first to strike us as *contrarian* and then, the more we live with them, to seem simply a *permanent truth at the heart of things*.

Second, I will argue that the *subject* of the sentence, like quantavolution, points to that underlying process, *electricity*, which, in the history of our species is responsible for

its most dramatic and sudden saltations from one level of complexity to the next—complexity of behavior in our local world, complexity of understanding of the universe we obsessively contemplates.

Third, I will focus on the *verb* of the sentence as raising the question of *control* which is central to the Quantavolution Series’ radical reassessment of the nature of men and gods, of God and ‘Man’—in *God’s Fire*, in *Homo Schizo*, and in the work which may be deemed that series’ culminating work, *The Divine Succession*. The human riddle which is deGrazia’s subject is *fear*, and the solution to it, which he never ceases to problematize, is *control*.

THE FORM OF THE UTTERANCE

To begin, then, with the form of Heraclitus’ utterance: in the Greek, *ta panta oiakizei keraunos*. Just like the neologism “quantavolution”, the utterance is meant to strike us first as rebellious, counterintuitive, contrarian. If the predicate phrase is “steers the universe”, we expect the subject to be something like “Zeus”, and to come at the beginning of the sentence, where the emphasis is typically greatest. Instead we get “lightning”, *keraunos*, more literally “thunder-bolt”, as the *last* word of the sentence, emphatically replacing there whatever subject traditional Greek piety would have been expecting. The best which Greek piety could have done to accommodate this sentence to its traditional beliefs is that, by a kind of metonymy, the traditional top god of Greek religion, Zeus, was being referred to by the weapon he wielded in fighting that series of battles with the Titans and Typhon which eventuated in his triumphant assumption of the helmsmanship, the governance, of sky and earth.

With just the same rhetorical effect, when we hear ‘quantavolution’, we recognize the latter half of the neologism as the termination of the name for a master paradigm explaining the earth and the cosmos, the “-volution” of “evolution”. Constant familiar use of the word “evolution” makes us assume that this termination, indicating a ‘rolling’ or ‘turning’, should begin with a smooth ‘e-’, short for the Latin prefix ‘ex-’,

indicating a smooth opening out, as in the unrolling of a scroll. We expect this because to this day mainstream science seems to be unable do without the word ‘evolution’ as the master term for its paradigm of the development of life in the biosphere, even though that development now includes well-agreed-upon sudden and violent irruptions from outside the biosphere. Instead of rolling with the e-, DeGrazia prefixes his root for ‘turning’ with something that makes it not a process but an event, a bursting ‘quanta’ of something “discrete (i.e., distinct, non-continuous”).² DeGrazia’s neologisms (hologenesis and theotropy would be others), like Heraclitus’ utterances, are meant at first just to grab us and shake us up. That is their short-term intention. Their long-term aim is to become a constant part of our thinking, as prolonged reflection shows their exact fit with the deep structure of reality

Other fragments of Heraclitus are aimed at jolting us into reflection about the deep structure of reality as well. Some of these also make mention of Zeus and of the helmsmanship of the universe, a theme crucial to our inquiry. Fragment after fragment seems obsessed—like Leon Lederman?— with the reducibility of every thing to a unity in the form of a single *logos*, and this Greek word’s multiple translations must all be held in mind as a set if the power of Heraclitus’ assertions is to be felt. *Logos* can mean a word, a speech, a saying, a story, an account— even a formula for a deep underlying structure. But like the Latin word *ratio*, which comes from the root *ra-* of the verb “say”, the Greek *logos* comes from the verb *lego*, also “say”, and used this way it can instead mean a simple ratio which can be put into words or numbers, as in the ratio of one whole number to another.

Further, Heraclitus articulates his ratios in a very specific context: that of one element of the physically observable universe to the rest. Much of his thought, like that of his predecessors in the so-called Milesian school, consists of hypothesizing a single element which is forever undergoing transformations into other elements, in ratios about which something can be “said”, relations which can be “spoken of”, often in terms of

² de Grazia 2005.xi. I quote from the second page of Ami de Grazia’s “Born on Q Street”, the Introduction to her *Abridgment of the Quantavolution Series*.

whole numbers. Indeed, the term he uses to introduce the notion that the world is an ordered whole is *kosmos*, and *kosmos* is said to have been first used in that sense by Thales, “founder” of the Milesian “school”. A common activity of that school seems to have been to speculate about orderly process of transformation among elements with numerical ratios to each other in their possible combinations; these are in effect speculations about order. *Kosmos* in Homeric and Hesiodic song never designates anything more than some local order, as of a choral dance or a disciplined army marching together into battle; and indeed, these oral traditions’s account of catastrophic events over many generations makes the world seem very much *not* an ordered whole. For Thales, all things in the *kosmos* were transformations of water; for his successor Anaximenes, of air; for the contrarian Xenophanes, of not one but two elements, earth and water; for Heraclitus, famously, of fire. This was a new and proto-scientific concept of order, in which the causes of change, even the most catastrophic changes, could be spoken of in terms of simple elements and process. Heraclitus even seems to have posited a Great Year of 10,800 years, composed of 360 “days” each of which was 30 years long (a human generation), whose winter solstice was the destruction of the whole *kosmos* by water (*kataklysmos*) and whose summer solstice was its destruction by fire (*ekpurôsis*).

When he tries to speak of the deep structure of reality, or more simply of “the god”, Heraclitus tends to speak about fire. Allow me to charge the atmosphere with five fire utterances, in English and then in Greek:

- 1) Fragment 90: “The totality of things is an exchange for fire, and fire an exchange for all things, in the way good [are an exchange] for gold, and gold for goods.”
*puros te antamoibê ta panta kai pur hapantôn hokôsper chrusou chrêmata kai chrêmaton chrusos.*³
- 2) Fragment 76a: “Fire lives the death of earth and air lives the death of fire; water lives the death of air, earth that of water.” *Zê pur ton gês thanaton, kai aêr zê ton puros thanaton, hydor zê ton aeros thanaton, gê tov hydatos.*

³ Unless other wise noted I use the translation from Robinson 1987, and have transliterated the facing Greek text.

- 3) Fragment 67: “God [is] day [and] night, winter [and] summer, war [and] peace, satiety [and] famine, and undergoes change in the way that [fire], whenever it is mixed with spices, gets called by the name that according s with [the] bouquet of each [spice]. *ho theos hêmerê euphronê, xeimôn theros, polemos eirênê, koros limos, alloioutai de hokôsper <pur>, hokotan summigei thuômasin, onomazetai kath' hedonên hekastou.*
- 4) Fragment 30: “[The ordered?] world, the same for all, no god or man made, but it always was, is, and will be, an everliving fire, being kindled in measures and being put out in measures.” *kosmon ton auton hapanton ouîte tis theôn oute anthrôpôn epoiêsen, all' ên aei kai estin kai estai pur aexiôn, haptomenon metra kai aposbennumenon metra.*
- 5) Fragment 31: “Fire’s turnings: first, sea and of sea half [is] earth and half ‘burner’”. *puros tropai prôton thalassa, thalassês de to men hêmisu gê, to de hêmisu prêstêr.*

Paraphrased in proto-scientific prose, this set of sayings appears to assert 1) that one observable element, fire, is more fundamental than others; 2) that each of the classical four elements are capable of total transformation into another, and in that sense can “die” as one and be “born” as the other; 3) the actual qualities we sense in the other elements are in fact variants on the potential qualities of fire, just as the Supreme Being is actually a set of opposites each of which has the potential to change from one to the other; 4) that the ordered world we see had no beginning or creation and will have no end either, but always consists of fire, in some measure or other of transformation to the other elements; and 5) that at one extreme transformation fire becomes, via sea, earth, and that at another it becomes, via sea, a mysterious entity called *prêstêr*, literally ‘that which sears, singes, burns, burns up’.

THE SUBJECT OF THE UTTERANCE

As you can no doubt sense, my selection, ordering, and paraphrase of these five “fire utterances” is for the sake of leading us to something in them as dramatic as are the

“quanta” of quantavolution. That something is the mysterious entity, or event, with which I ended my set of five, the *prêstêr* that burns things up. With it we move into the second facet of quantavolution’s T-shirt utterance, its subject. The quantavolutionist will be supremely curious to ascertain what kind of cousinship this *prêstêr* has with the *keranos*, the “lightning” or “thunderbolt”, that steers all things. Both will be for Heraclitus forms of fire, and not just any forms, but forms which become visible with the greatest suddenness and intensity and decisive power.

The closeness of their cousinship is to be found, in fact, at the culmination of the most intensely catastrophic episode in traditional Greek myth as sung by the Hesiodic tradition. At the climax of the *Theogony* Zeus, having become equipped at last with the *keranos* which is the supreme weapon of the universe, and having caused the “rout” of the other Titans (“roust” is another translation of the *tropai* translated more literally a moment ago as the “turnings” of fire from sea to earth and *prêstêr*), enters into the final struggle for supremacy with the last and most threatening of cosmic rebels, the serpentine and many-headed Typhon. As long as the battle is unresolved, earth and sky and sea and underworld are all subject to the effects of the lightning and the “burning” exchanged between the two contestants:

And through the two of them heat took hold on the dark-blue sea, through the thunder and lightning, and through the fire from the monster, and the scorching [*prêstêron*] winds and blazing thunderbolt [*keranos*]. The whole earth seethed, and sky and sea: and the long waves raged along the beaches round and about at the rush of the deathless gods: and there arose an endless shaking. Hades trembled where he rules over the dead below.⁴

Finally Zeus assembles “thunder and lightning and lurid thunderbolt [*keranos*] to delivers the *coup de grace* : “He burned [*eprese*] all the marvellous heads of the monster about him.”⁵ *Keranos* and *prêstêr*, under Zeus’ control, for the first time, it seems, came to steer all things.

⁴ Evelyn-White 1914. lines 844-850.

⁵ Evelyn-White 1914. lines 854-856.

What English word, then, shall we say is the subject of quantavolution, such that “lightning” is speaking for it on the T-shirt? The simplest answer is surely “electricity”.⁶

What water and air were to Thales and Anaximenes, so, we might say loosely, “mechanical and gravitational processes of enormous magnitude” have been to cosmologists when they have “postulated [them] as the forces playing the primary (causal) role” in the shaping of the universe. And what fire or lightning was to Heraclitus, electricity has been to quantavolution: “electricity, together with electrical effects,” quantavolution claims, “has increasingly been recognized to play a role in cosmic actions.”⁷ These sentences are in the concluding chapter of *Solaria Binaria*, entitled simply “Time, Electricity, and Quantavolution”. They are there because the sudden actions of electricity of enormous magnitude—“lightning”, we may call it for short-- are the subject of the physical theories of three collaborators— De Grazia and Earl Milton, the authors of the 1984 *Solaria Binaria*, and Ralph Juergens, to whom that book is dedicated— which pose the prodigious challenge to the fundamental discipline of physics on which the entire Quantavolution Series rests. Before they ever got on a T-shirt, Heraclitus’ words, in Greek, just after “To the Memory of Ralphs Juergens”, were placed boldly at the center of the title page: *ta de panta oiakizei keraunos*, with the English translation at the bottom.

What soon emerges, by Chapter Two of *Solaria Binaria*, “The Solar System as Electrical”, is that just as for Heraclitus lightning is that form of fire which most strikingly and immediately draws attention to itself, so for the collaboarators on *Solaria Binaria* lightning is that form of electrical activity which most readily reminds us of how powerful a force in the cosmos electricity can be. And just as for Heraclitus lightning can

⁶ After delivering this paper at the Center for Quantavolution Conference (Paris June 8-10, 2008), my attention was drawn there by Scott Mainwairing to the remarkable work of A. L. Peratt (most notably Peratt 2003). The implications of his reconstruction of the celestial phenomena recorded in tens of thousands of petroglyphs on every continent except Antarctica would be, for this paper, to use the word “plasma” rather than simply “electricity” as the functional substitute for Heraclitus’ *keraunos*.

⁷ Concluding page of Ch. 17, “Time, Electricity and Quantavolution”, in *Solaria Binaria*, deGrazia & Milton 1984.

take the form of that *prester*, that consuming fire, which was decisive at a supremely important event in the past, a moment without understanding which we cannot discern the order of the cosmos today, so in the scenario of *Solaria Binaria* our present solar system has been constituted by devolution from a former electrical axis which formed the central and most awesome spectacle witnessed by the earliest hominids. In Chapter Six, “The Electrical Axis and its Gaseous Radiation”, both Heraclitus and the slightly later Pythagorean Philolaus are adduced as descriptors of this Axis; Philolaus called it “The Central Fire”, on which he wrote a book of which Plato made great use in the *Timaeus*. Heraclitus’ description of the everliving fire by which this uncreated and unending cosmos is structured provides terms DeGrazia and Milton find particularly fitting to describe the spectacle of that ancient axis: “an ever-living fire, kindling itself by regular measures and going out by regular measures.”⁸ And in the true spirit of Heraclitus, the form this fire took at the dawn of humanity, like all things, has *changed*. At the beginning of the final chapter there are seven “major historical happenings” for which the authors, in summary, claim that “We have presented physical and cultural evidence”. Number Five in this list goes: “The binary electrical axis has been diffused into a pervasive solar wind, which permeates the planetary plane.”⁹

Quantavolution and Heraclitus thus both wish to train our understanding of the universe to an essential paradox. On the one hand, this universe is sempiternal, neither created out of nothing nor destined to go out of existence, and the incessant multiple manifestation of its fundamental forces can be discerned best by singling out one of them—fire, electricity—as the key to its activities in the rest. On the other hand, the sempiternal operations of these forces can lead to configurations and events of the most central importance to our understanding of our own place in the universe, and it is true in a special sense that it is *these events* that govern the universe *we* inhabit. A battle in the sky terminated by an electrical discharge of dimensions never experienced by humans since, or the diffusion of a Central Fire or electrical axis, can be contemplated from our

⁸ Fr. 31, as translated at DeGrazia and Milton 1984.59, where they cite the crucial prior work on the same authors in Rose 1979.

⁹ DeGrazia and Milton 1984. .

historical distance as decisive starting points for all we must value in our own self-understanding. They, not some creation act or Big Bang, began *our* universe.

One thinks here of Whitehead's provocative statement, in the light of the revolutions of relativity and quantum mechanical theory: "The event is the unit of things real." Heraclitus shows forth the nature of reality in the event of the lightning flash, recurrent on a small scale seasonally, paramount on the grandest scale when Zeus took hold of the tiller of the universe. DeGrazia and Milton argue, again in this final chapter of *Solaria Binaria*, for the pervasiveness in reality of electrical forces on all scales: "In every natural and biological process -- creation, accumulation, structure, function, storage, dissipation -- electrical theory is at home. The smallest observable or inferable operation of a molecule, and the largest explosion of a nebula, can be referred to the unified language and lawful behaviors of electricity." And just as Heraclitus is ready, in his use of the word *prêstêr*, to gesture towards the one event most important for Greek beliefs about the coming to be of the Zeus-governed world they inhabited, so De Grazia and Milton are ready to see, in the fate of the binary electrical axis, the foundation for Number Two of their seven claims: "Human nature originated abruptly with a complex culture in the first age of binary instability, precipitated by electrical and hormonal changes, and displaying anxious self-awareness and a grasping for self-control."

THE VERB OF THE UTTERANCE

With the word "control" we come finally to the third facet of the four words on the Q T-Shirt, specifically to its third word, *oiakizeî*, "steers". It is the sudden and violent "event" of lightning that "holds the *oiax*, the handle of the rudder, the tiller of the ship"—hence is at the helm, in charge. In a cousin fragment, there is another verb for "control", *ekubernese*, and this time its subject is a word which means "plan" or "ordinance": "One thing, the wise thing, [is] – knowing the plan which steers all things through all things."¹⁰ And this fragment, in turn, begins just like another: "One thing, the only wise thing, is

¹⁰ Robinson 1987.31 I use Robinson's translation in order to give access to his discussion (107-108) of complexities in reading what is probably a corrupt text.

unwilling and willing to be called by the name Zeus” (Fragment 32).¹¹ Putting the three together, we divine that there is a steering of all things being done by something visible to us as the thunderbolt, and that this steering is according to the definite plan of a single being whose nature is only partially disclosed to us by the name of the traditional top God of Greek religion—the God who became top by wielding the thunderbolt as precisely the most powerful weapon in the universe. Heraclitus is careful to make his theologico-political statements in language he will not allow to be subsumed into traditional piety.

From the verb for ‘steering’ in the second of our three fragments, *ekubernese*, derives not only, via the Latin form, the word ‘government’ but also, via the 1948 formalization of the term by Norbert Wiener, ‘cybernetics’. This term rapidly found its way into many disciplines, among them electrical network theory, systems theory, computer science, biology, psychology, and philosophy, including political philosophy. The one notion common to its use in all these disciplines is, again, *control*. Nowadays we know this all-powerful term as a blithe and winged prefix, ‘cyber-’, as in our afternoons in a ‘cybercafe’, whence our ever more frequent ventures into ‘cyberspace’.

Now *control*, precisely, is the problem that the author of *Homo Schizo* and *The Divine Succession* has posed for mankind in a radically original way. What earlier humans are everywhere to be found saying about the world is that sky-gods created it and shaped it, often by their fighting over it to see who controlled it. What quantavolution says about early humans is that out of the existential fear induced by these primal events came an all-pervasive *human* desire to control. And simultaneously with this desire, in the hologenesis of human nature, emerged the impulse to treat the celestial agents of catastrophe as “gods”, beings on to whom humans immediately projected their own desire to control. These gods controlled everything, and the paramount task became to control *them*. In the language of *The Divine Succession*: “From his very beginnings, mankind has identified and sought to control the heavens and the gods, the mountains and oceans, the plants and animals.” This was no idyll, in the manner of the first chapters of *Genesis*. It was the product of a schizotypical fear:

¹¹ Robinson 1987.27.

Gods were in everything (as the early philosopher Thales conjectured). They controlled everything, it appeared, but were unaccountable and did both the expected and the unexpected. The simple mechanism of religion is then... fears... displaced upon supernatural ... appearances of the world, and the development of practices to control... transactions with the supernatural appearances. The drive to control oneself... is paramount and moves man to wherever his fears alight.¹²

This somber vision is worthy of Lucretius' account of the origin of religion: in the fear of death, and in the fear of lightning.

Nor, in deGrazia's somber vision, will a simple displacement of religion by science lead to what has frequently summarized as man's four most essential needs: "for freedom from fear, for material subsistence, for new experiences, and for a disinterested arbitration of human conflicts." All of these require controls over the self (selves), others, and nature." Subsistence, experience, justice, fearlessness. In the name of these four needs, deGrazia points out again and again in *Homo Schizo*, 20th century totalitarian governments, often on the basis of scientific claims such as the Marxist, have perpetrated more wars and more state murders than any known religion in history.¹³

In the face of such a vision one wanders why deGrazia has not, as Heraclitus was said to have, "finished up a hater of mankind, spending his time wandering in the mountains and living off grass and herbs."¹⁴ Heraclitus was called in antiquity the Weeping Philosopher, and counterposed to the atomist Democritus, the Laughing Philosopher. Indeed, another look at our internet image of deGrazia (on the first page of the Grazian Archives or Wikipedia) shows him smiling, arguably even laughing, with, as Adam Smith's was said to be, "a countenance of inexpressible benignity." Yet more work on this T-shirt remains to be done! Why is its original wearer not weeping?

¹² *The Divine Succession*, Chapter One: "The Genesis of Religion", deGrazia

¹³ This claim is most meticulously documented in *The Black Book of Communism: Courtois et al.* 1999.

¹⁴ Diogenes Laertius, *Life of Heraclitus*, Ch 3, in Robinson 1987.166.

Certainly we can make an effort to find in other of Heraclitus' utterances glimpses of his views on the four needs, the four demands, of humans. On subsistence he asserts simple that one pair of opposites between which "the god" is perpetually changing back and forth is *koros loimos*, "satiety and famine", no more eradicable than peace and war. On experience it is clear that he never ceases to search for it both within and without. Of external experience he says (Fragment 55): "Whatsoever things [are] objects of sight, hearing, [and] experience, these things I hold in high esteem."¹⁵ Of his esteem for internal experience he says, first and enigmatically, (Fragment 101): "I investigated myself."¹⁶ More emphatically in the spirit of the author of *The Divine Succession*, he affirms (Fragment 115): "Soul possesses a *logos* (measure, proportion) which increases itself."¹⁷ And to this activity there can be no end: (Fragment 45) "One would never discover the limits of soul, should one traverse every road— so deep a measure [*logos*] does it possess."¹⁸ The openness to experience here reminds one of the *ewige Streben*, the eternal striving, Goethe, in his eighties, assigned to the hero of *Faust* as he entered a perpetually evolving paradise.

About justice and fearlessness Heraclitus also weighs in with language determined to turn the human toward the divine. Of justice in the sense of a "law" which discernment can deem either "lower" or "higher" he says (Fragment 114): "Those who [would] speak with insight must base themselves firmly on that which is common to all, as a city does upon [its] law—and much *more* firmly! For all human laws are nourished by one [law], the divine [law]." And, bracingly, it is the very context of calling for the fight for justice that he comes the closest to honoring fearlessness, the kind of Homeric bravery which earns a man immortal glory: (Fragment 44) "The people should fight on behalf of the law as <they would> for <their> city-wall." 33 And (Fragment 24): "Those slain by Ares, gods and mankind honour." 23

¹⁵ Robinson 1987.39.

¹⁶ Robinson 1987.61.

¹⁷ Robinson 1987.67.

¹⁸ Robinson 1987.33.

Humans, then, in key fragments of Heraclitus just as on key pages of *The Divine Succession*, pursue their needs and their demands most honorably when they have an eye to the divine. It would take another paper to do justice to the arguments of the theotropic vision deGrazia elaborates in that culminating book, leading, in its final “Catechism” to the most provocative of all claims (Number Forty-Five): QUESTION: “*Will the cosmos ever be divine?*” ANSWER: The theotropic universe will ultimately dominate the entropic universe.” In our eternal striving we may well come upon beings which, in the complexity of their understanding of the universe and their powers to control it, may well strike us, deGrazia suggests, as bearing to us a relation we could well call that of gods to humans.

To be open to this possibility is to lead a “theotropic” life. And if we arrive at its actuality, it will have been the lightning that led us there.

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