
“Dark Matter”: Science as Metaphor in the Poetry of Jared Carter

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In his landmark book, *Science and Poetry* (1926), I. A. Richards argues that poetry ultimately depends upon what he calls “The Magical View” of the Universe, premised upon belief in Spirits, Inspiration, and the Efficacy of Ritual. With that view of the universe seriously threatened by scientific materialism, Richards conjectures that “it is a possibility to be seriously considered that Poetry may pass away with it” (47-48).

Lending Richards’s conjecture plausibility are the misgivings—even fears—expressed by a number of prominent poets about the imaginative impact of modern science. These poets have repeatedly voiced views that harmonize with Richards’s belief that, by threatening the Magical View of the Universe, science threatens poetry. Though himself a heterodox thinker, Blake expressed his misgivings about Newtonian science as a prayer, so manifesting his own faith in the Magical View defined by a Divine Spirit, Inspiration, and the Efficacy of Ritual.” May God us keep,” Blake prayed, “From Single vision & Newton’s sleep” (lines 87-88).

Expressing a similar sentiment, the Romantic poet John Keats protests in his *Lamia* that the “Single vision” of Natural Philosophy (what we would now call science) is disenchanting the world, driving out all spiritual presences, all magic, all mystery. In these lines, Keats especially laments how the science of Sir Isaac Newton’s *Opticks* (1704) has reduced the awe-inspiring rainbow to a merely natural phenomenon fully explained by mathematics:

. . . Do not all charms fly
At the mere touch of cold philosophy?
There was an awful rainbow once in heaven:
We know her woof, her texture; she is given
In the dull catalogue of common things.
Philosophy will clip an Angel’s wings,
Conquer all mysteries by rule and line,
Empty the haunted air and gnomed mine
Unweave a rainbow (II, 229-37)
Poetic protests against how science is killing the Magical View of

the universe also come from the other side of the Atlantic. Consider, for instance, these lines from Walt Whitman:

When I heard the learn'd astronomer,
When the proofs, the figures, were ranged in columns before me,
When I was shown the charts and diagrams, to add, divide, and
measure them,
When I sitting heard the astronomer where he lectured with much
applause in the
lecture-room,
How soon unaccountable I became tired and sick,
Till rising and gliding out I wander'd off by myself,
In the mystical moist night-air, and from time to time,
Look'd up in perfect silence at the stars. (1-8)

In his "Sonnet—To Science," the American poet Edgar Allan Poe gives us an even more extended lament over how that science is destroying the Magical View of the universe, thereby threatening the poet's vision:

Science! true daughter of Old Time thou art!
Who alterest all things with thy peering eyes.
Why preyest thou thus upon the poet's heart,
Vulture, whose wings are dull realities?
How should he love thee? or how deem thee wise?
Who wouldst not leave him in his wandering
To seek for treasure in the jewelled skies,
Albeit he soared with an undaunted wing?
Hast thou not dragged Diana from her car?
And driven the Hamadryad from the wood
To seek a shelter in some happier star?
Hast thou not torn the Naiad from her flood,
The Elfin from the green grass, and from me
The summer dream beneath the tamarind tree? (1-14)

However, in the poetry of the modern American poet Jared Carter, winner of the Walt Whitman Award and the Poets' Prize, readers encounter a quite different response to modern science, a response that not only shields the Magical View of the Universe from the desiccating effects of science, but also converts that science into an imaginative portal opening onto that Magical View. For in Carter's work (most strikingly in his sonnet "Dark Matter"), we see a surprising re-creation of science, one that converts science—no longer

understood in its own mathematical and empirical terms—into a metaphor inviting the reader to contemplate imaginative horizons outside of scientific paradigms.

As the antiscientific protests of Blake, Keats, and Whitman make clear, science threatens the Magical View of the Universe—and therefore poetry itself—whenever its empirically verified mathematical formulae become *the* one and only true interpretation of the world. Those who believe that such formulae capture all of reality can no longer accept as meaningful or trustworthy any imaginative perspective that violates the boundaries of those formulae. They therefore find in poetry only groundless illusion. That is why Blake prays so fervently for deliverance from “Single Vision.” But a poet need not accept science as *the* definitive interpretation of the universe. Indeed, Carter could not convert science into metaphors if he did not share with fictionist Marguerite Young the belief that “there is no single reality” (qtd. as epigraph to “Shelterbelt”). Believing that the science’s mathematical-empirical interpretation of the world is only one partial reality frees Carter to reimagine science in such a way that that science becomes a metaphor through which the reader perceives realities outside scientific formulae. This reimagining thus transforms science, making it no longer a threat to poetry, but rather an imaginative resource for its creators.

To be sure, science surfaces relatively rarely in Carter’s poetry. As critic Ted Kooser remarks, Carter writes “with affection and honesty” about the kind of people he came to know growing up in small-town Indiana: “carpenters, seamstresses, housepainters, preachers, grave-diggers, cooks and mechanics, working-class with working-class lives and stories” (xv). At least as a rigorous mathematical-empirical pursuit, science does not usually loom large in the lives of such people. Consequently, science does not appear in many of Carter’s poems. Yet, science does emerge as a distinct presence in a number of his poems and, in those poems, the reader repeatedly sees Carter protecting the Magical View of the Universe by transforming that science into imaginative metaphors that allow readers to perceive realities beyond those acknowledged by science itself.

Consider, for instance, Carter’s poem “Comet.” The very title summons thoughts of those scientists W. H. Auden calls “The High Priests of Telescopes” (“Ode to Terminus” 1), scientists who labor unceasingly to understand how a comet moves along a highly elliptical orbit that carries it deep into outer space before it returns at a hard-to-predict time (McDonald).

But the reader quickly realizes that this gnomic villanelle is not really about the movement of a bundle of ice and rock through outer space; rather, it is about the movement of a human speaker who indicates, by a shift to the collective “we” in the closing stanza, that his or her movement typifies the movement of all humans who must move “beyond these barricades / mysterious . . . / To the dim light and the large circle of shade” (1-3). The speaker offers only oblique hints as to the identities of the “dim light and the large circle of shade,” indicating simply that being “summoned” (10) beyond the “barricades” entails some “image [being] shattered, [and] made / again into a thousand shapes of yearning, / somewhere not far” (10-12). The cryptic speaker assures readers that:

. . . Beyond these barricades
The scattered pieces come together, swayed
by spectral lines that draw the most discerning
to the dim light and the large circle of shade. (12-15)

Readers, awakened by the title’s relevance of science in interpreting this poem, may see in the word “spectral” a telling word-play. As *The Oxford English Dictionary (OED)* indicates, the word may mean “of or pertaining to, appearing, or observed in the spectrum” (“spectrum,” def. 5a) and illustrates this meaning with quotations from scientific publications, notably journals in physics. Scientifically schooled readers will understand that the spectroscopes, which are used by space scientists, break the light coming from comets and other astronomical objects into a series of distinct lines whose color and distribution reveal the chemical makeup of the light source (cf. “Infrared Spectroscopy”). Such readers will therefore recognize as germane this scientific meaning of “spectral” in a poem with the title that Carter has given it, particularly when the word appears in the scientifically relevant phrase “spectral lines.”

Given that this poem involves a human passage that goes beyond “barricades/mysterious” (another of the word’s meaning found in the *OED*), it appears relevant: “Having the character of a spectre or phantom; ghostly” (“spectral,” def. 2). The alert reader will detect the possibility that the movement that Carter examines in the poem is the movement of the “spectre” that is the (im)mortal human spirit—a movement as difficult to trace as that of a comet—to “beyond these barricades-to the dim light and the large circle of shade” (18-19). Making that possibility appear more plausible is the metaphor that Carter deploys in his last stanza, a metaphor that

converts the science of quantum physics into more than physics. Speaking of the mysterious course we must traverse (15), the speaker asserts, “Along this path we cannot be conveyed / but move as particles or waves, returning not far, beyond these barricades” (16-18). In these lines, the dual particle-wave character of photons of light becomes a metaphor for the dual body-spirit character of the human being. Carter’s metaphoric use of science also carries the connotation of quantum mechanics’ inescapable indeterminacy: the movement of the human spectre or spirit to the dim-light-and-shade resists univalent conceptual capture just as the movement of a photon of light resists univalent analysis as particle or wave. By turning quantum physics into a metaphoric representation of the bivalent movement of the human body-spirit, Carter allows into this poem a Magical View of the Universe premised on belief in spirits. Science thus ceases to threaten poetry and instead enriches it.

Carter similarly deflects the threat of scientific desiccation in his poem “Vow” by again turning the science of quantum mechanics into a metaphor suggestive of the Magical View of the Universe. Just with two complex sentences, three rhyming couplets, this poem gives voice to a lover who declares:

Now by that dark entanglement by which we knew
That neither time nor space had lent dimension to
Our souls entwined—so that, unspooled and distant, we
Would ever be attuned, and schooled invisibly,
Each to the other bound—by this I swear. And who
Conveys the stars will know this kiss proves us both true. (1-6)

At the heart of this poem, the reader finds the scientific concept of quantum entanglement. Pioneered by the physicist John Bell, the science of quantum entanglement takes us into a realm that Einstein considered “spooky” (qtd. in “Bell Prize”). Since the OED identifies “spooky” as an adjectival form of “spook” and defines the latter as “spectre, apparition, ghost,” quantum entanglement is an ideal concept for metaphorically connecting science to the Magical View, sustained by belief in spirits. Such a connection is precisely what Carter creates as he makes quantum entanglement a metaphor for the time-and-space defying fidelity of lovers bound by a vow.

The theory of quantum entanglement, as explained by physicists at the University of Toronto, reveals that “the world is a very weird place where quantum particles become correlated in pairs. These pairs predictably interact

with each other regardless of how far apart they are: if you measure the properties of a member of the entangled pair, you will know the properties of the other” (“Bell Prize”). Carter unmistakably draws on his understanding of this science when he prompts the speaker in “Vow” to declare that, because of their “dark entanglement,” (1) the souls of the two vow-joined lovers are so “entwined . . . that unspooled and distant” (3) though they might become, they will “ever be attuned . . . / Each to the other bound” (4-5). Because it is a vow recognized by the unnamed Being “who / Conveys the stars” that effect this soul-to-soul entanglement, the Magical View manifests itself in this poem not only in belief in spirits (or souls), but also in the efficacy of ritual, in this case the ritual of a vow, quite possibly a wedding vow solemnized by religious authority.

Readers may well be impressed by the imaginative power Carter evinces in converting physics into metaphor in “Comet” and “Vow.” But in no poem does Carter more daringly transform science into a metaphor preserving the Magical View of the universe than in his Petrarchan sonnet “Dark Matter”:

Out from the primal star that sprang unique
Before all others from the void: inflamed
Inflationary, monstrous in its framed
And failing particles that into weak
And strong—electric—gravitational fields
Dispersed, and so began that headlong fall
Through time and space—

And was the brightness all
That ever was or came to be? One yield?
Or is there presence back, before, beyond
That growing pulse, that opens inwardly
Upon—into—some other realm? The way
Can only be imagined, like the bond
Of faith that points us to the mystery:

He is not here, but risen, on this day. (1-14, emphasis in the original)

The language of this sonnet suggests that Carter is well versed in modern cosmological theory: his references to the emergence of subatomic particles and of electrical forces during the inflationary period of the Big Bang suggest a careful and intense study of modern physics. However, Carter interprets that scientific theory as something more than mathematical

formulations backed by empirical verification. It is indeed in his sonnet that theory serves as a symbolic metaphor for beliefs central to the Magical View of the universe. Carter makes the dark matter identified in his title—whose very existence cosmologists posit on theoretical grounds with only sketchy empirical evidence—a metaphor for all that we cannot see but accept on faith.

The pivot away from science-qua-science to science-as-metaphor comes when the poet responds to the cosmic brightness born in the Big Bang—a brightness that still fills the skies—to questions about what no observer can see:

. . . was the brightness all
That ever was or came to be? One yield?
Or is there presence back, before, beyond
That growing pulse, that opens inwardly
Upon—into—some other realm? (7 – 11)

Signaling a move away from the mathematical-empirical rationality of science to another kind of understanding, the poet declares that “the way / Can only be imagined” (11-12). Yet Carter is not leaving cosmological science behind in the remaining lines of the poem; rather, he is transforming it into metaphor and, through that metaphor, science offers an unexpected epiphany into the character of the “the bond / Of faith that points us to the mystery” (12-13) of immortality.

To comprehend the imaginative need for the kind of imaginative metamorphosis that Carter effects when he converts cosmological science into a poetic metaphor informed by religious faith, the reader might consider Peter Medawar’s explanation of “the limits of science.” A Nobel laureate in medicine for his immunological research, Medawar argues that, because of its intrinsic conceptual limitations, science can never answer the “ultimate questions,” such as “What are we all here for? And “What is the point of living” (66). For answers to these questions, Medawar informs his readers that they must look outside of science to “the domains of myth, metaphysics, imaginative literature or religion” (17). As Carter converts science into metaphor, he turns not to “imaginative literature *or* religion,” but rather to imaginative literature *and* religion.

In his religiously informed sonnet, Carter breaks through the “single vision” that Blake fears as he rages against the stupor of the spirit that he believes Newton is inducing in his mathematical-empirical paradigm

for the universe. Ironically, however, Carter's poem recalls how Newton himself reinterprets science through metaphor in his unpublished private musings. Though his inverse-square scientific law that quantifies gravity as a physical force in the universe is well known, Newton's private, imaginative understanding of gravity has not received much public attention. Gravity, Newton avers in his personal reflections, is the music; God is the Piper (cf. McGuire and Rattansi 108). Newton's imaginative, essentially metaphorical, understanding of gravity is one that harmonizes quite well with the Magical View of the universe, even if Blake and other Romantic poets regard his mathematical science as a dis-enchanting threat. In his metaphoric reimagining of science, Newton, like Carter, affirms a religious understanding of the cosmos that well accords with a Magical View premised on belief in Spirits, Inspiration, and Efficacy of Ritual.

Carter may know nothing about Newton's imaginative conception of gravity or about its religious underpinnings; however, for anyone committed to a Magical View of the Universe, it is hardly surprising that Carter's metaphoric reimagining of science, like Newton's private musings on the nature of gravity, opens a door to religious belief. The final line of "Dark Matter" unmistakably echoes the words that the angels say to the astonished disciples when they find the sepulcher of their Master miraculously empty on the first Easter morning. Readers will, in fact, recognize the last line of "Dark Matter" as a close paraphrase of the King James Version of Luke 24: 6.

Richards does not define belief in the Resurrection, announced in this biblical verse, as an essential element of the Magical View of the Universe; nonetheless, it is a belief that harmonizes well with that View, entailing, as it does, belief in the immortality of (re)embodied spirits, belief in the inspiration guiding the biblical writers who left the scriptural account of this supernatural event, and belief in the Easter rituals that commemorate it. In turning one of the more mysterious aspects of modern cosmology into a metaphor of religious beliefs that humans believe in without empirical proof, Carter thus affirms the Magical View of the Universe. Also, in putting the Resurrection at the very center of this metaphoric affirmation, Carter reminds readers of what William Butler Yeats believed about great poetry. Though himself not a professed believer in the Christian doctrine of the Resurrection, Yeats declares that "No man can create as did Shakespeare, Homer, Sophocles, who does not believe, with all his blood and nerve, that man's soul is immortal" (qtd. in Steiner 228).

Yeats says nothing about science in asserting the indispensability of belief in immortality in the writing of great poetry. Some readers may even regard Yeats's assertion as an implicit rejection of modern science given that, in the view of philosopher Corliss Lamont (and many others), "science . . . proves conclusively that immortality is an illusion" (cf. Lichliter 220). Readers cannot therefore miss the imaginative daring in Carter's converting science into a metaphor that forcefully affirms the Christian version of the belief that Yeats regards as essential to great poetry.

Other poets have regarded science as a pursuit that reduces the entire cosmos to mere dust: Keats sees Newton's science relegating the sublime rainbow to "the dull catalog of common things" (233); Poe deplores how science reduces a previously enchanted realm to merely "dull realities" (4); Whitman actually grows "tired and sick" as he considers how scientists "add, divide, and measure" (3) the very stars of heaven. In dramatic contrast, Carter boldly makes science his entry point into wonders unseen and mysterious, particularly those of religious faith. With good reason, poet Dana Gioia sees in Carter's poetry the "passion of conviction" (qtd, in "Jared Carter"). In "Dark Matter," that passionate conviction is both artistic and religious.

Predictably, some physicists will resist the convictions evident in Carter's appropriation of one of their scientific concepts as poetic metaphors, especially metaphors expressing religious faith. The University of Maryland physicist Robert L. Park, for instance, holds that "Science is the only way of knowing—everything else is just superstition" (215). In his conviction that "scientific laws are the only way to explain the world" (5), Park completely repudiates the Magical View of the Universe, and consequently closes the door against poetry such as Carter's. Evidently, Park feels that to move outside of the "Single-Vision" that science provides is to move into worthless illusion. A metaphoric appropriation of science to celebrate in poetry a religiously informed Magical View of the Universe will fare rather poorly in Park's court of judgment because he believes that "God . . . is not a useful concept" (215).

Some prominent scientists, however, are much more open to Carter's metaphoric interpretation of theoretical science as an expression of religious faith. That metaphoric re-imagining of religious faith harmonizes remarkably well with the reasoning of Oxford University's molecular biophysicist Alister McGrath, who perceives "an obvious parallel" between religious faith and the speculative faith of theoretical physicists advancing M-theory—a theory that unifies "a number of different 'string theories,' which hold that matter

is made up of infinitesimally small strings of vibrating energy” (71-72). Even though there is as yet “no experimental evidence for the truth of the theory . . . it is trusted . . . because it offers an intelligible and coherent account of reality” by “holding together what might otherwise be disparate and disconnected aspects of physics” (72). Likewise, McGrath recognizes “the intellectual legitimacy” of “believing in [the] theory of . . . God . . . on account of its capacity to unify and explain, even though the theory itself [can] not be proved” (72-73). Carter’s metaphoric fusion of speculative science and religious faith makes all the more sense in light of McGrath’s conviction that “both science and faith, when at their best, help us to make sense of who we are, why we are here, and what we ought to do. We need [the] rich vision [created by both together] to enable us to live out lives to the full” (75).

Like McGrath, Harvard astronomer Owen Gingerich views the cosmos from a perspective recognizably similar to the one Carter adumbrates in “Dark Matter.” Gingerich explains that he believes in “the existence of a Creator” without proof of such a Being because “the universe makes more sense” to him in the light of such a belief. He compares his posture on this issue to that of colleagues who, without “the slightest shred of reliable evidence,” posit a multiverse of parallel universes because such a conception renders the cosmos more comprehensible to them (134-36).

In comparing their religious faith with the speculations of scientific theorists, McGrath and Gingerich leave open the door to the Magical View of the Universe. They do so by positing the same type of equivalence that Carter suggests in “Dark Matter”: in the aspects of scientific theories (such as dark matter), which scientists accept without empirical proof, we discern a faith akin to that which sustains religion. Having opened the door to a Magical View of the Universe, Gingerich underscores how scientific theorists must rely on non-empirical belief by drawing from the imaginative art (poetry) that view nourishes. Gingerich quotes from Robinson Jeffers’s poem “The Great Wound”: “The mathematicians and physics men / Have their mythology; they work alongside the truth, / Never touching it . . .” (qtd. in Gingerich 140-41).

In asserting that physicists never touch the truth, Jeffers may bring to mind Camus’s response to modern science. In Camus, we see a gifted literary artist who, like Carter, interprets science as metaphor, but he does so in ways that do not reflect any religious conviction harmonious with the Magical

View of the Universe. Consider, for instance, this passage from *The Myth of Sisyphus* in which Albert Camus generally interprets science in general and physicist Niels Bohr's scientific model of the atom in particular as metaphor:

Here are trees and I know their gnarled surface, water and I feel its taste. These scents of grass and stars of night, certain evenings when the heart relaxes—how shall I negate this world whose power and strength I feel? Yet all the knowledge on earth will give me nothing to assure me that this world is mine. You describe it to me and you teach me to classify it. You enumerate its laws and in my thirst for knowledge, I admit that they are true. You take apart its mechanism and my hope increases. At the final stage you teach me that this wondrous and multicolored universe can be reduced to the atom and that the atom itself can be reduced to the electron. All this is good and I wait for you to continue. But you tell of an invisible planetary system in which electrons gravitate around a nucleus. You explain this world to me with an image. I realize then that you have been reduced to poetry: I shall never know. Have I the time to become indignant? . . . [T]hat science that was to teach me everything ends up in a hypothesis, that lucidity founders in a metaphor, that uncertainty is resolved in a work of art. What need had I of so many efforts? The soft lines of these hills and the hand of evening on this troubled heart teach me much more. I have returned to my beginning. I realize that if through science I can seize phenomena and enumerate them, I cannot, for all that, apprehend the world. . . . (73)

When science becomes metaphor in Camus's poignant comment, it is a metaphor signaling epistemological defeat, a mental cul-de-sac that first reminds the philosopher of the conceptual futility of science and then of the pathetic plight of man trapped in an absurd universe, forever cut off from reassuring knowledge of his place in the cosmos. In viewing science as metaphor, Camus conveys frustration, despair, even incipient anger—not hope or faith. When science becomes metaphor in Camus, that metaphor closes rather than opens possibilities for belief in spirits, inspiration, and efficacy of ritual; it thus falls far outside the Magical View of the Universe that animates Carter's sonnet. Given that Richards avers that poetry ultimately requires the Magical View of the Universe, readers should perhaps not be surprised that, for all of his brilliance in fiction, drama, and philosophy essays, Camus did not write poetry. And though the passage just considered

is powerful prose, it remains prose, not poetry.

As a writer who speaks of the world-explaining scientist being “reduced to poetry” and so “founder[ing] in metaphor,” Camus appears dismissive of poetry, particularly poetic metaphor, as an imaginative opening on vistas that illuminate transcendent truth. Potently informed by religious convictions that harmonize with the Magical View of the Universe, Carter’s appropriation of cosmological science in his sonnet reflects a radically different and more hopeful motivation for viewing science as metaphor.

On the other hand, some poetry lovers may regard Camus’s dismissal and Carter’s preservation of the Magical View of the Universe as irrelevant to the well-being of poetry. After all, even if Blake, Keats, Whitman, and Poe did fear the desiccating effect of science, Thomas Hardy was a skeptical thinker decisively influenced by modern scientific theories (cf. Millgate 132) regardless of their harsh implications—he was still writing great poetry at the time that Richards speculated that the rise of the scientific worldview might doom poetry. A closer look, however, reveals that Hardy does recognize that, as a poet, he needs the Magical View of the Universe, even if he cannot rationally defend it or harmonize it with the science that he accepts.

In a remarkable 1915 letter Hardy sent to his friend C. W. Salley, incorporated in his autobiographical *Life and Work of Thomas Hardy*, Hardy comments skeptically on the philosophy of Henri Bergson, outlined in a book that Dr. Salley lent him. Hardy confesses to Salley that he “want[s] to be a Bergsonian” and that he finds Bergson’s theories “more delightful than those they contest” (489-90). But Hardy’s scientific rationality intrudes: “I cannot help feeling all the time,” he complains, “that [Bergson] is rather [more of] an imaginative and poetical writer than a reasoner, and that for his attractive assertions he does not adduce any proofs whatever” (489). To Bergson’s desire to “trace a line of demarcation between the inert and the living,” Hardy responds, “Well, let us, to our great pleasure, if we can see why we should introduce an inconsistent rupture of order into uniform and consistent laws of same” (489). Immediately, Hardy pulls out Ockham’s Razor—a tool often wielded by the scientific thinker—to discredit what he sees in Bergson going beyond what is empirically demonstrable. “I fear,” Hardy writes, “[Bergson’s] philosophy is, in the bulk, only our old friend Dualism in a new suit of clothes—an ingenious fancy without real foundation, and more complicated, and therefore less likely than the determinist fancy . . . that he endeavors to overthrow” (490). At this point, Hardy appears far

from the Magical World View that Richards believes is essential to poetry, so far that Hardy's remarkable accomplishments, as a poet who apparently rejects that view, would seem to discredit Richards's warning of the antipoetic effects of science.

Yet, in his letter to Dr. Salleby, Hardy turns in an unexpected and astonishing revelation. In almost a volte-face, Hardy follows his skeptical critique of Bergson with a surprising appeal: "You must not think me a hard-headed rationalist for all this," adding this stunning admission: "Half my time—*particularly when writing verse*—I 'believe' (in the modern sense of the word) not only in the things Bergson believes in, but in spectres, mysterious voices, intuitions, omens, dreams, haunted places, etc. etc." (490, emphasis added). Suddenly, Hardy the poet *does* rely on the Magical View of the Universe. Nevertheless, indicating the highly problematic way he embraces this view, Hardy concludes his letter with a paragraph that takes back with the left hand half of what he has conceded with the right: "But then," Hardy writes, "I do not believe in these [spectres, mysterious voices, and such things] in the old sense of belief any more for that . . ." (490). It appears that the scientific rationalist in Hardy feels guilty for having professed *any* belief in spiritual phenomena.

Still, Hardy appears (with Richards) to recognize that spiritual phenomena—the stuff of the Magical View of the Universe—sustain poetry. Nowhere in Hardy's poetry do we find the "spectres, mysterious voices . . . and omens" that we might associate with the Magical View of the Universe more pervasive than in his *meisterwerk*, *The Dynasts*. Sustained by an imposing metaphysics, this is a work dominated by what Hardy calls an Overworld of "Phantom Intelligences," including an Ancient Spirit of the Years, a Spirit of the Pities, Spirits Sinister and Ironic, a Shade of Earth, miscellaneous other Spirit-Messengers, and Recording Angels (Act I, Characters). Thus, in Act I we find the Spirit of the Years instructing a Recording Angel to "Open and chant the page / 'Thou'st lately writ," and then hear the Angel mournfully declare:

Now mellow-eyed Peace is made captive,
And Vengeance is chartered
To deal forth its dooms on the Peoples
With sword and with spear.
Men's musings are busy with forecasts
Of muster and battle,

And visions of shock and disaster

Rise red on the year.

Nor do these Phantom Intelligences fade away in the course of this very long poetic drama. The stage direction for the Overworld depicted in the After Scene that follows Act Seventh of Part Third of this epic work indicates that auditors here see “Enter the Spirit and Chorus of the Years, the Spirit and Chorus of the Pities, the Shade of the Earth, the Spirits Sinister and Ironic with their Choruses, Rumours, Spirit-messengers and Recording Angels.” In this After Scene, the Spirit of the Years concedes that for all its capaciousness depiction of the workings of the Imminent Will, the play has only revealed:

one flimsy riband of Its web

. . . web Enorm,

Whose furthest hem and selvage may extend

To where the roars and plashings of the flames

Of earth-invisible suns swell noisily,

And onwards into ghastly gulfs of sky

We also hear a Semichorus of the Pities sing to the Immanent Will, accompanied according to a stage direction by “aerial music” the following lines, which echo the King James Bible (cf. Ps. 136: 23, Luke 1:48; Rom. 12: 16):

To Thee whose eye all Nature owns,

Who hurlest Dynasts from their thrones,

And liftest those of low estate

We sing, with Her men consecrate!

In “the whole supernatural apparatus of the Overworld—the Phantom Intelligences with their spectral names and ghostly powers of vision and swooping visits to the human scene,” critic Susan Dean finds a cumbersome “feature that . . . impedes access to *The Dynasts*” and so contributes to “the poem’s remoteness” (4). Nonetheless, this supernatural apparatus does seem to reflect the poet’s reliance on the Magical View of the Universe that Richards believes to be essential for poetry.

The fact that Hardy, particularly when he is writing poetry, acknowledges that he tends to “believe” in supernatural spiritual manifestations buttresses Richards’s argument that poetry needs the Magical View of the Universe to survive. Hardy’s “belief” in such manifestations would further suggest that he shares the doubts that Yeats expresses when he

skeptically regards those poets whose “verse kills the folk ghost and yet would remain verse” (2120). However, the fact that Hardy feels compelled to hedge his professed “belief” in spirits and other elements of the Magical View of the Universe with rationalist reservations and semantic word-splitting about *believing* in “the modern sense of the word,” not in “the old sense,” raises questions about the imaginative integrity of his belief. After all, in order to “believe (in the modern sense of the word),” and so to claim the imaginative sustenance of the Magical View of the Universe, Hardy temporarily leaves behind science. What Hardy never does is what Carter so powerfully does: he does not metaphorically reimagine science so as to make it a portal into the Magical View.

Hardy may never recognize the need for metaphoric reimagining of the science that so potently influences his thinking. The distinguished physicist Freeman Dyson does understand that need for that reimagining. In his equivocating about how he does-and-does-not believe in spectres and other supernatural phenomena, Hardy appears to be unwilling to decisively break with Park’s view that science offers the only path to *real* truth. Dyson, on the other hand, dismisses such a view as far too narrow. He has said that scientists who claim that in deploying their scientific tools they are “comprehending the totality of nature” are guilty of “overrat[ing] the capacity of the human mind.” “I prefer,” Dyson says, “to live in a universe of inexhaustible mysteries” (qtd. in Shewe 300). In approaching such mysteries, he develops a science-as-metaphor strikingly similar to the one Carter develops in “Comet” as he asserts that we should regard “science and religion . . . as complementary” in the same way that light’s wave character is complementary to its particle character in Bohr’s quantum physics (134). Dyson asserts that we need such complementarity because “The formal frame of traditional theology, and the formal frame of traditional science, are both too narrow to comprehend the totality of human experience” (134).

Even combining science and religion in metaphorical complementarity leaves Dyson unsatisfied, convinced as he is that “science and religion belong to a wider array of human faculties, that also includes art, . . . music, drama . . . history, and literature” (135). Attracted to “literature [as] the great storehouse of human experience” (135), he evinces a particular fondness for poetry, quoting freely from Byron, Shelley, and Blake. Richards, of course, would understand why a scientist like Dyson loves poetry: Dyson leaves ample space in his imaginative perspective for the Magical View of the

Universe by choosing to “live in a universe of inexhaustible mysteries,” fully open to poetry and to religion. No wonder Dyson especially cherishes the work of the nineteenth-century poet William Blake, declaring that “this crazy poet . . . gave us more spiritual information . . . [in his poetry] than all the theologians and scientists of his time in their learned volumes” (138). Dyson, looking ahead, appears confident of the Inspiration which constitutes part of the Magical View of the Universe that sustains poetry when he predicts: “In the future . . . if we are looking for spiritual information, we are more likely to find it among poets than scientists” (138). The marvelous poetry—especially the sonnet “Dark Matter”—from the pen of a still-living poet—gives readers strong reason to endorse Dyson’s prediction.

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