

# EINSTEIN AND MYSTICISM

by Gary E. Bowman

*Abstract.* Albert Einstein deliberately and repeatedly expressed his general religious views. But what were his views of mysticism? His statements on the subject were few, relatively obscure, and often misunderstood. A coherent answer requires setting those statements in historical, cultural, and theological context, as well as examining Einstein's philosophical and religious views. Though the Einstein that emerges clearly rejected supernatural mysticism, his views of "essential" mysticism were—though largely implicit—more nuanced, more subtle, and ultimately more sympathetic than "mere appearance" suggests.

*Keywords:* cosmic religion; cosmic religious feeling; Albert Einstein; mysticism

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Albert Einstein remains the icon of scientific genius. Often viewed as a scientist who believed in God, Einstein's religious views are of interest both intrinsically and because they are fodder in the ongoing struggle between science and religion in the culture at large.

"I soon learned to scent out that which was able to lead to fundamentals," wrote Einstein, "and to turn aside from everything else, from the multitude of things which clutter up the mind and divert it from the essential" (1949a, 17). In religion, the essential arguably lies in mysticism and the mystical experience, and therein lies my goal: to elucidate Einstein's relation not to religion generally, but to mysticism.

Throughout, we should recall that Einstein was not a theologian or philosopher, but a theoretical physicist: his autobiography consists almost entirely of a discussion of physics in historical, philosophical, mathematical, and conceptual contexts. "The essential in the being of a man of my type," he wrote, "lies precisely in *what* he thinks and *how* he thinks, not in what he does or suffers" (1949a, 33). And what Einstein mostly thought about was theoretical physics.

This article proceeds through the following sections. "Einstein the Mystic—or Not" illustrates the lack of clarity regarding Einstein and mysticism by sampling some conflicting views. "On Mysticism" defines "essential

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mysticism,” and argues that such mysticism is not irrational, but arational. “Einstein on Mysticism” examines Einstein’s remarks about mysticism, as well as misinterpretations thereof. “Einstein, Spinoza, and Schopenhauer” considers Einstein’s connection to Benedict de Spinoza and Arthur Schopenhauer, and their connections to mysticism. “Einstein the Pantheist?” considers whether Einstein’s God was identical with nature, or only manifest in it. “The World as Concept” discusses Einstein’s view of the world as concept-based, and compares this with the mystical, while “Intuition, Arationality, and Emotion” dispels the notion of Einstein as devoid of emotion or intuition. “Cosmic Religious Feeling” considers Einstein’s own religion in the light of essential mysticism. Finally, in “Understanding Einstein,” I paint a closing portrait of Einstein and mysticism—a vignette which, I hope, possesses some measure of the delicacy, subtlety, and nuance the subject warrants.

#### EINSTEIN THE MYSTIC—OR NOT

Einstein’s statements on religion have evoked great though often superficial interest, with both believers and atheists citing him for support. Gordin called the literature on Einstein’s religion “embarrassingly partial or polemical” (2002). But if Einstein’s general religious views have been treated inadequately, his relation to mysticism—that most subtle, seemingly impenetrable, and often misunderstood manifestation of religion—appears to have been treated cursorily, at best.

Many endorse, rather uncritically, the notion of “Einstein the mystic.” Ken Wilber might be called a New Age writer, and thus viewed with suspicion by many scientists. But Wilber’s concerns are not the frivolous manifestations of New-Ageism—crystals, pyramids, or vortices—but its connections to mystical elements in major religious traditions. A serious writer, Wilber deserves consideration. As editor of *Quantum Questions*—a collection of essays by famous twentieth century physicists, Einstein included—Wilber stated that “every one of the physicists in this volume was a mystic” (1984, 9), and that Einstein had “a deeply mystical outlook” (1984, 5).

According to historian of religion Karen Armstrong, Einstein “claimed that mysticism was ‘the sower of all true art and science’” (1993, 338); thus, “Einstein had an appreciation of mystical religion” (1993, 395). But Armstrong’s Einstein “quote” is unreliable, and an example of the frequent misappropriation of Einstein’s words (see “Einstein on Mysticism” below).

Some scientists, too, thought Einstein mystical. Einstein colleague and biographer Philipp Frank wrote that “According to Einstein’s conception . . .” it is particularly the mathematical physicist “who has this mystical experience” (1947, 284). That mathematical simplicity and beauty lead to

successful theories was “the basis of [Einstein’s] cosmic religion. It is a ‘mystical experience’” (Frank 1949, 284).

For Banesh Hoffmann—physicist, mathematician, and Einstein collaborator and biographer—Einstein “was one of the most religious of men, but his religious beliefs [were] too deep for adequate delineation in words.” Hoffman thus points to ineffability, so fundamental to mysticism—but he goes further: “Einstein, with his feeling of humility, awe, and wonder and his sense of oneness with the universe, belongs with the great religious mystics” (1972, 94).

Theologian Markus Mühling (2011, 231) suggests that the motivation for Einstein’s scientific work is an epistemic-mystical (*epistemisch-mystische*) experience arising from the grandeur of nature, and finds an element of the mystical in Einstein’s cosmic religion (2011, 230).

But physicist and historian Max Jammer argues that “Einstein himself expressed his personal aversion to mysticism several times” (see “Einstein on Mysticism” below) (1999, 126). This, I suspect, is in accord with many scientists who might reject (though perhaps with no clear idea why) the notion that Einstein was a mystic, or even sympathetic to mysticism.

## ON MYSTICISM

Was Einstein a mystic? Did he believe in mysticism? Without a careful definition of mysticism, our questions are unclear, or even meaningless. One definition of mysticism might concern supernatural powers or abilities—palm reading, Tarot cards, communication with the dead, and so forth. But any such definition is unacceptable here: a straw man based on popular misconception, an easily ridiculed distortion of mysticism’s fundamental meaning. Moreover, because Einstein dismissed such supernatural mysticism, it is of little interest to us.

The mysticism that concerns us appears in all major religious traditions, and in great variety. Without committing to an equivalence of either mystical practice or mystical experience amongst various traditions, we define an “essential mysticism.”

*Definition.* *Essential mysticism* is the seeking after a heightened, expanded, or otherwise alternative connection to, or experience of, reality—one that transcends our “ordinary” experience of physical reality. The mystical experience—in which reality is often described as a unity, or a whole—is achieved not through intellectual or rational methods *per se*, but through direct experience.

This is neither a comprehensive nor a universal definition of mysticism, but it suits the task at hand, capturing only the basic, essential facets needed

for the discussion herein. Because of its sparsity, it is neutral with respect to divergent scholarly approaches to mysticism.<sup>1</sup>

Mysticism so defined is not a means to superhuman or supernatural powers, nor some fantastic or bizarre alternate reality, but a different *experience* of reality. This mystical experience of reality need not, and typically does not, imply that ordinary reality is “wrong,” but rather that it is distorted or incomplete. If intoxicated consciousness (i.e., under the influence of a mind-altering drug) is a distortion—not imaginary, not a fabrication, but a distortion—of true, ordinary experience, then in analogy the mystic might regard ordinary experience as a distortion of the true, mystical experience.

Our definition provides little *description* of the mystical experience. In part, this is because the nature of that experience—the specifics of which vary greatly—is irrelevant to the “real” question: roughly, *Whether, and in what sense, did Einstein accept the possibility of a realm beyond the “merely physical”?* Moreover, mystics are notoriously reticent to describe the mystical experience, and even when they do so, *the experience itself* remains ineffable, indescribable in words.

Consider describing sight to someone blind from birth. A physicist might invoke, in great detail, Maxwell’s equations, electromagnetic waves, and photons. No matter: *any* description would utterly fail to convey to our blind friend what we mean by “sight”—*that* can be grasped only by seeing.

Any intellectual analysis of mysticism is constrained by this essential inaccessibility of the mystical experience. We may study mysticism in philosophical and theological terms, through its manifestation in religious or anthropological context, perhaps even through the mystic’s physiology. But mysticism and the mystical experience would remain as remote to us as is sight to our blind friend—as remote as is love or humor to a being who had studied those emotions abstractly but was incapable of feeling them.

That mysticism largely exempts itself from intellectual examination and criticism may seem suspect, and may suggest that mysticism is irrational. *Rational* is defined as “of, pertaining to, or based on reason or reasoning; in accordance with reason; not foolish, absurd, or extreme.” *Irrational*, conversely, is “contrary to or not in accordance with reason; unreasonable, utterly illogical, absurd.”<sup>2</sup> But there is a third possibility. *A-rational* is defined as “unconcerned with or outside rationality; nonrational,” and assessing mysticism’s alleged irrationality entails just this distinction.

Most rational knowledge is based *not* on reason alone, but on reason and *experience*, the raw material out of which reason molds rational judgments. Should I suddenly believe I could walk on water, that belief would be irrational: not due to reason alone, but due to reason and the fact that I could never do so previously. But in an arena where we have no experiential

basis, reason can become impotent, making rational judgments difficult or impossible.

It is plausible, then, that knowledge could be acquired *arationally*. This is the kind of knowledge that the mystic would access: not contrary to reason, yet not based on reason—based, instead, on the mystic's direct experience, and fundamentally inaccessible to others.

Despite their reticence, mystics do often describe one aspect of their experience: their reality is an undifferentiated, unified whole, absent concepts and categorization (see “The World as Concept” below). Similarly, in Einstein and his philosophical progenitors we will find a recognition of the limitations stemming from our human dependence on concepts and ideas, as well as a deep sense of unity. (Holton discusses Einstein's unifying vision [2003].)

#### EINSTEIN ON MYSTICISM

*Max Jammer.* The central feature of Einstein's life was not his religious thought or his personal journey, but his physics. He provided no careful definition of mysticism, did not directly state his view of essential mysticism, and said little about mysticism generally—and what he did say was often misinterpreted.

Max Jammer's widely reviewed *Einstein and Religion* (1999) has been called “the best book to date on Einstein and religion” (Brooke 2006, 944), and “the final stone in a foundation from which a new series of Einstein scholarship can build” (Gordin 2002). It is thus important to assess Jammer's views on Einstein and mysticism.

Jammer rejects an Einstein sympathetic to mysticism, or himself a mystic. He first recounts how it was suggested to Einstein at a dinner party that relativity “ought to make a great difference to our morale.” Replied Einstein, “It makes no difference. It is purely abstract—science.” And, in response to a remark that relativity embodied a “mystical aspect,” his wife Elsa “broke into laughter with the words: ‘Mystical! Mystical! My husband mystical!’” (Jammer 1999, 125).

These seemingly compelling accounts tell us little. Both are anecdotal and verbal, and cannot be taken as careful statements of Einstein's views. In the second, moreover, it is Einstein's wife (not Einstein) speaking, and the sense in which she intended the word “mystical” is unknown.

Jammer uses both accounts to discredit linking Einstein to mysticism *through his scientific results*. That no such connection exists, and that Einstein recognized as much, has no impact on any *serious* argument relating to Einstein and mysticism. Mysticism is *not* conventional religion, it is about neither morale nor morals, and its justification is to be sought not through science, but on its own terms.

Jammer also states that “Einstein never showed any interest in Far Eastern philosophy and never expressed any sympathy with Oriental religious thought or mysticism” (1999, 236). Yet in “Religion and Science”—one of Einstein’s best known and most careful discussions of religion—we read that the beginnings of “cosmic religious feeling,” Einstein’s own, self-professed religion, already appear “in many of the Psalms of David and in some of the Prophets. Buddhism, as we have learned especially from the wonderful writings of Schopenhauer, contains a much stronger element of this” (Einstein 1930).

Claiming that “Einstein himself expressed his personal aversion to mysticism several times,” Jammer quotes a 1921 letter: “The mystical trend of our present time, showing itself especially in the exuberant growth of the so-called Theosophy and Spiritualism is for me only a symptom of weakness and confusion” (Jammer 1999, 126). But what *was* the mystical trend *at that time*? Einstein provides a partial answer: theosophy and spiritualism.

Despite variant meanings, Einstein likely associated *theosophy* with the theosophical movement which was founded in 1875, strongly ascendant when Einstein’s letter was written, and at its peak in 1928 (Washington 1993). Though this movement arguably included a component of essential mysticism, it was also strongly associated with the occult and spiritualism—elements Einstein would certainly have rejected, and that are not part of essential mysticism.<sup>3</sup> Spiritualism is “the belief that the spirits of the dead can communicate with the living, especially through a medium; the practice of this belief.” But essential mysticism need not entail belief in an afterlife, let alone communication with the dead. Thus, “the mystical trend of our present time” which Einstein associated with “weakness and confusion” was likely not essential mysticism, but the occult caricature thereof characterized by supernatural powers or abilities.

The risk of gleaning Einstein’s view of a subtle religious term from one remark taken out of context is reinforced in a 1954 letter to philosopher Eric Gutkind: “the word God is for me nothing more than the expression and product of human weakness.” Here, in language similar to that of the 1921 letter, is a glaring conflict with Einstein’s many positive references to God. But Einstein was commenting on Gutkind’s book, *Choose Life: The Biblical Call to Revolt*, and, understood as pertaining to a personal, theistic God, the remark is unsurprising.

As further evidence of Einstein’s “aversion to mysticism,” Jammer notes that Einstein called the humility with which nature filled him “a genuinely religious feeling that has nothing to do with mysticism” (Jammer 1999, 126). But this simply dissociates a *particular type* of humility—that with which nature filled Einstein—from his *particular concept* of mysticism. If *mysticism* here is characterized by supernatural powers or abilities, Einstein’s remark has no bearing on essential mysticism.

But why did Einstein refer to “a genuinely religious feeling that has nothing to do with mysticism”? For if the goal of mysticism is the realization or awareness of an alternate reality, one might say that mysticism is characterized by, even *defined by*, genuine religious feeling. Again, the conflict evaporates if Einstein meant here not essential mysticism, but supernatural mysticism.<sup>4</sup>

Dismissing, finally, the notion of an Einstein at all sympathetic to mysticism, Jammer refers to “the absence of any mystic or other irrational components in Einstein’s philosophy of religion,” and states that Einstein’s “philosophy of religion never transcended the realm of the rational” (1999, 127). But essential mysticism is arational, not irrational. And, as I will show, Einstein’s religious views *did* transcend the rational. Finally, Jammer’s remarks, including his reference to Einstein’s *philosophy* of religion, suggest a belief that religion can be grasped through reason alone, absent experience. But Einstein’s religion was grounded in experience—he espoused not cosmic religious *philosophy*, but cosmic religious *feeling*.

Einstein, wrote Jammer, “never conceived of his ‘cosmic religious feeling’ as a substitute for rational thinking” (1999, 127). Nor would the mystic: the mystical experience is neither a substitute for nor the opposite of rational thinking. Rather, it is its complement: a different pursuit, with different goals, attained through different means.

*Wie ich die Welt sehe (How I See the World).* Around 1930, Einstein wrote “Wie ich die Welt sehe,” a deliberate, carefully crafted, and succinct (5–6 page) statement of his worldview. Republished over many years in slightly modified forms, often with other titles (e.g., “My Credo” or “What I Believe”), the final paragraph, in English translation, begins: “The most beautiful experience we can have is the mysterious. It lies at the cradle of both true art and true science” (Einstein 1929; Einstein 1934b).

In some translations, though, *mystical* replaces *mysterious*, indicating mystical sympathies. Philipp Frank quotes Einstein thus: “The most beautiful emotion we can experience is the mystical. It is the sower of all true art and science” (Frank 1947, 284). Karen Armstrong writes that Einstein “claimed that mysticism was ‘the sower of all true art and science’” (1993, 338). And in Lincoln Barnett’s popularization, *The Universe and Dr. Einstein* (to which Einstein wrote a brief foreword), Einstein is quoted as: “The most beautiful and most profound emotion we can experience is the sensation of the mystical. It is the sower of all true science” (Barnett [1948] 1962, 100). (Frank and Barnett cite no sources, while Armstrong’s is ambiguous, incorrectly cited, and uses *mysterious* rather than [Armstrong’s] *mystical*.)

Such quotes, *if accurate*, would stand as crucial indicators of Einstein’s perspective on mysticism. But German remained Einstein’s language of choice, and many Einstein quotes that routinely appear in English were

originally written in German. Translation thus becomes critical—for “mysterious” is no more synonymous with “mystical” than is “science” with “scientology.”

In the original German, the problem stems from the word *Geheimnisvolle*, usually translated as *mysterious*—only rarely as *mystical*. This suggests that the above quotes are in error—and Einstein himself removes any doubt. Puzzled by Barnett’s quotation and its implications, one Ugo Onofri wrote Einstein in 1954 or 1955, seeking clarification (Onofri 1954). Einstein’s response reads, in part (1954a): “The misunderstanding here comes from a bad translation of a German text, in particular the use of the word ‘mystical.’” Thus, “Wie ich die Welt sehe” and its (properly translated) variants are simply mute as to whether and in what sense Einstein had mystical sympathies.

*The Hermanns Conversations.* In four little-known conversations with William Hermanns (1930, 1943, 1948, 1954), Einstein discussed many topics. These exchanges are valuable in part because they portray Einstein in discussion with one individual over nearly a quarter-century. Moreover, Hermanns was a native German speaker and a scholar (in sociology), and took careful notes during the exchanges. This, plus consonance between Hermanns’s reports and Einstein’s remarks elsewhere, suggest that Hermanns’ accounts are likely reliable. Mysticism was, on occasion, discussed:

Hermanns: I have become a member of the German Occult Society.

Einstein: In order to contact God through mediums, I suppose.

Hermanns: Yes, Professor, I am a mystic . . .

Einstein: Ah, yes . . . King Saul was a mystic, too. He wanted to conjure up the prophet Samuel, so he used the Witch of Endor to satisfy his curiosity. (Hermanns 1930, 27)

This 1930 exchange reveals Einstein’s view of mysticism as supernatural: the mystic is connected with the occult; he contacts God through mediums. Indeed, in the biblical story Einstein cites, the “mystic” Saul was no selfless seeker, no essential mystic, but a man consumed by self-preservation.

In the 1948 conversation, Einstein’s view of mysticism seems more accepting: “There is a mystical drive in man to learn about his own existence. And how can he achieve this? Galileo showed the way by creating a system of thought that binds together observed facts” (Hermanns 1948, 90–91). Here, Einstein is evidently *not* referring to supernatural mysticism, but to a deep drive to grasp our own existence.

Hermanns later asks “whether it wasn’t the mission of the Jews as a chosen people to atone for the sins of the world.” Einstein responds: “I can’t comprehend such mysticism, but if you feel gratified by such speculations, go ahead” (Hermanns 1948, 108). Here, Einstein’s use of “mysticism”



is unclear—apparently neither essential nor supernatural. Einstein also comments on whether he was a mystic: “Intuition tells man his purpose in this life. . . . [My] purpose is induced by some unknown factors. These factors make me a part of eternity. In this sense I am a mystic” (Hermanns 1948, 103). But it is unclear how and in what sense one’s purpose being induced by unknown factors makes one a mystic.

In their final (1954) conversation, Einstein tells Hermanns: “I am not a mystic. Trying to find out the laws of nature has nothing to do with mysticism. . . . Through my pursuit in science I have known cosmic religious feelings. But I don’t care to be called a mystic” (Hermanns 1954, 117). But this denial stops short of rejecting mysticism itself. And again we must ask: what does Einstein mean by “mysticism?”

Einstein’s use of the terms *mystic* and *mysticism* was not entirely consistent. But, as we will see, there is a consistent *lack* of condemnation of essential mysticism, and an affirmation of the existence of something which, though it provides cold comfort to the theist, points beyond the “merely physical.”

#### EINSTEIN, SPINOZA, AND SCHOPENHAUER

*Benedict de Spinoza.* Because Einstein said little about mysticism, our arguments must be indirect, relying in part on his philosophical sympathies. Regarding religion, Einstein felt especially close connections with two philosophers: Benedict de Spinoza (1632–1677) and Arthur Schopenhauer (1788–1860), which I discuss in order.

Einstein read and admired Spinoza’s defining work, the *Ethics* (Holton 2003, 32–33). As stated by both Einstein and others, Einstein’s God was Spinoza’s God; colleague Arnold Sommerfeld wrote that “Einstein stands in particularly intimate relation to the God of Spinoza” (1949, 103). Einstein even called Spinoza “the ideal example of the cosmic man” (Hermanns 1930, 26). Spinoza’s thought is a vast subject; I focus on but three aspects thereof that are reflected in Einstein: the relation of God and nature and the attendant rejection of miracles; the impersonality of God and his elevation beyond human attributes; the necessity of the nature of God and of the world.

Both Spinoza and Einstein rejected a personal God that intercedes in human affairs through miracles. And while God permeates his work, Spinoza was (and is) called an atheist, for his impersonal God was foreign to the traditional God of the Jews or Christians. For Spinoza, God was to be found not in miracles, but in the unexceptional operation of natural law: “. . . from miracles we understand neither God’s essence, nor his existence, nor his providence. . . these things are far better perceived from the fixed and immutable order of nature” (Curley 1994, 37). But is such a God

simply a metaphor for nature, and Spinoza's religion mere pantheistic admiration for the natural world and its laws?

Some say yes: citing Spinoza's phrase *deus sive natura*—God, or Nature—Holton states that “For Spinoza, God and nature were one” (Holton 2003, 33). Yet Spinoza himself disabuses us of this notion. The *Theological-Political Treatise* was written when the *Ethics* was already far along, but in a less imposing style (Curley 1994, xv). Therein we find: “Because the power of nature is nothing but the power of God itself, it is certain that insofar as we are ignorant of natural causes, we do not understand God's power” (Curley 1994, 15–16). Evidently, Spinoza's God is manifest in nature, not identical with it—and Spinoza was questioned on this very point. His answer was unequivocal: to think that the *Treatise* “rests on the assumption that God is one and the same as Nature . . . is a complete mistake” (Curley 1994, 16). If pantheism means not the *manifestation* of God throughout nature, but the *identification* of God with nature, then Spinoza was not a pantheist.

In the *Ethics* we find that “neither intellect nor will pertain to God's nature” (Curley 1994, 98), and attribution of a free will to God should be rejected “not only as futile, but as a great obstacle to science” (Curley 1994, 107). Those who say a supreme intellect and a free will pertain to God's nature do so because “they say they know nothing they can ascribe to God more perfect than what is the highest perfection in us” (Curley 1994, 98). For Spinoza, evidently, granting supreme intellect and free will to God merely reveals the provincial intellect of the grantor. Apparently Spinoza does not *reduce* God to nature, but—like the mystic—*elevates* God to something inconceivable.

And Spinoza denies God not only human attributes, but free creative powers. First revisit Einstein: “What really interests me is whether God could have created the world any differently; in other words, whether the demand for logical simplicity leaves any freedom at all” (Calaprice 2000, 221). It appears that Einstein imposed logical simplicity—what the physicist might call *elegance*—on nature, and thus on God. But Spinoza provided the careful, detailed justification for this imposition—a justification resting on God's perfection. For a perfect God can institute only perfect natural laws, so perfection severely restricts God's creative freedom.

Arguing that “Things could have been produced by God in no other way, and in no other order than they have been produced,” Spinoza writes:

. . . if things could have been of another nature, or could have been determined to produce an effect in another way, so that the order of Nature was different, then God's nature could also have been other than it is now . . . consequently, there could have been two or more Gods, which is absurd. So things could have been produced in no other way and no other order, and so on, q.e.d. (Curley 1994, 106).

The imposition of perfection, then, necessarily constrains God's nature, denying God human attributes such as free will: "... things have been produced by God with the highest perfection, since they have followed necessarily from a given most perfect nature. Nor does this convict God of any imperfection, for his perfection compels us to affirm this" (Curley 1994, 107). For Spinoza, a nonanthropomorphic God is not a *choice*, but a logical requirement.

Spinoza seems more logician than mystic. But as Mason put it, we find in him "the seamless unity of 'God, or nature', the integration of mind and body and a progress towards beatitude th[r]ough becoming part of an eternal whole. The general story is familiar from countless mystics. By an intuition of our part in nature we become a part of it, and experience eternity" (Mason 2002).<sup>5</sup>

*Arthur Schopenhauer.* Einstein clearly stated his shared philosophical sympathies with Schopenhauer. Spinoza's *Ethics* is an austere work of formal philosophy, unlike Schopenhauer's easily accessible "Parerga and Paralipomena" —volume 2 of which Einstein read (Howard 1993), and which is the source of all Schopenhauer quotes herein. Schopenhauer's ties to Einstein are not, like Spinoza, through Nature, God, and their relation, but through Kant's "thing in itself," will, and the mystical.

Born when serious expositions of Hinduism and Buddhism were increasingly available in the West, and shortly after publication of Kant's "Critique of Pure Reason" (1781), Schopenhauer's work strongly reflects both. Kant's thing in itself is one manifestation of the old and recurrent notion of "two worlds" (lucidly discussed in Hollingdale 2004, 11–20) —the proposition that beneath apparent reality lies some complete, unadulterated, and deeper reality. But we perceive not the thing in itself, not unadulterated reality—which is unknowable through sensory perception—but reality filtered through our senses and understood in terms of our human conceptual foundations. Since the thing in itself is foreign to "ordinary" reality, it cannot be comprehended (nor, therefore, discussed) in ordinary terms—much like the mystic cannot convey his experience of the mystical realm to others. The rough analogy between Kant's thing in itself—which was of great philosophical interest in Schopenhauer's day—and the essential mystic's claimed deeper experience of reality should be apparent.

Kant's thing in itself need not pertain to a physical object, and when Schopenhauer writes that "Thing in itself signifies that which exists independently of our perception, that which actually is," he means a *universal* thing in itself—a *most fundamental* world-thing, or entity, or concept, which underlies and determines the world of appearance. *This* thing in itself, he tells us, is *will* (Hollingdale 2004, 55).

For Schopenhauer, will is not something we control, *free* will, but *the will to live*: different from, and even opposed to, free will. Understood thus,

will controls us, not we it. Will is the motivator of all life, a psychological need that drives our behavior, rendering life empty and futile, a sort of self-imposed prison. But we *can* escape, says Schopenhauer, by utilizing our intellect to deny the will, thus attaining *liberation*. Denial of or triumph over will, then, is a triumph over the self seen as an independent entity, achieved by a vision of unity in which the individual is only a part. This denial of the individual, this merging with the whole of existence, is also very much what the mystic, particularly in Hinduism and Buddhism, aspires to.

For Schopenhauer, moreover, the premise “that the totality of things proceeded from an *intellect* and consequently existed as an *idea* before it became actual” is in fact false, because “the *idea* . . . is only the outer side of existence, something secondary, supplementary . . .” (Hollingdale 2004, 58). (Recall Spinoza’s remark that “neither intellect nor will pertain to God’s nature” [Curley 1994, 98].)

That reality cannot be fully understood through ideas applies even within nature. The existence of, say, an animal is “an unfathomable mystery.” Ideas explain *appearances* in nature, but they cannot unmask the thing in itself. “The existence of a given animal can be explained by its procreation,” yet this explains only appearances. Even with a full causal understanding of procreation, “we should still stand at last before the incomprehensible, because appearance remains appearance and does not become thing in itself” (Hollingdale 2004, 57). This proposal is not irrational, but arational: not contrary to reason, but a rejection of the notion that we can grasp reality, *the* thing in itself, through reason alone.

Schopenhauer wrote that his doctrine “could be called the true Christian philosophy” (Hollingdale 2004, 63). And this philosophy was evidently something close to mysticism, for “the true soul of the New Testament is undoubtedly the spirit of asceticism . . . precisely denial of the will to live” (Hollingdale 2004, 62).

Schopenhauer’s connection to Hinduism and Buddhism (discussed in Nicholls 1999), and to the mystical therein, is direct and explicit. In accord with Kant, and with the Hindu and Buddhist concept of *maya*, we find that “everything in nature is at once *appearance* and *thing in itself*. . .” (Hollingdale 2004, 56). And denial of the will—the real goal to be sought in life, the path to liberation—would be “in its essence identical with the *Magnum Sakhepat* of the Vedanta and the Nirvana of the Buddhists” (Hollingdale 2004, 61). Indeed, not unlike the Buddhist who seeks “emptiness,” or “the void,” denial of the will “is *for us*, who are phenomena of volition, a transition to nothingness” (Hollingdale 2004, 61) —not death, but an altered experience of reality, for our essence is volition, that is, will.

Hollingdale summarizes Schopenhauer’s philosophy, wherein the will to live leads to universal conflict, thus.

The suffering engendered by this conflict is the normal and inescapable condition of life . . . The way out of this circle of suffering lies in denial of the will, refusal to enter the contest: the power to do so is provided by the conscious intellect, which is capable of understanding the nature of the will and its effects and thus of striving to set them aside. Ultimately the only real good is extinction: the realization that the perceived universe—the ‘world as idea’—is as nothing. (Hollingdale 2004, 22–23)

The connection with Buddhism becomes apparent upon comparison with the first three of Buddhism’s “Four Noble Truths.”

- (1) Life is suffering.
- (2) The cause of suffering is grasping, that is, wanting.
- (3) Suffering is ended through enlightenment, that is, attaining nirvana.

Enlightenment (nirvana) is attained by awakening to a new vision of reality in which the self is “extinguished” and reality is perceived as a unified whole, without judgment or concepts. As we have seen, Einstein himself credited Schopenhauer for teaching us that Buddhism contains a strong element of cosmic religious feeling (Einstein 1930).

That nature is a magnificent manifestation of God; that humans view the world not as it is, but only through a framework of constructs and concepts; that the universe is a great, unfathomable mystery; that will (*not* free will) is the motivator of human behavior; that liberation is to be attained through denial of the self—all of these we will find echoed in Einstein’s own worldview.

#### EINSTEIN THE PANTHEIST?

More than a half century after Einstein’s demise, his intellectual assent remains a powerful motivator: both theists and atheists unjustifiably claim his support. Einstein repeatedly disavowed belief in an afterlife, or in a God that was personal or concerned with human morality. “I do not believe in the immortality of the individual,” he wrote, “and I consider ethics to be an exclusively human concern with no superhuman authority behind it” (Dukas and Hoffmann 1979, 39). Such statements—and there are many—clearly disprove “Einstein the theist.” Neither, however, do they prove Einstein’s atheism. The inability of many to conceive of religion absent a personal God is likely responsible for the labeling of not only Einstein, but also Spinoza—and on occasion, mystics—as atheists. But Einstein would have none of it: “In the view of such harmony in the cosmos . . . there are yet people who say there is no God. But what really makes me angry is that they quote me for the support of such views” (Löwenstein 1968, 156).

Banesh Hoffmann wrote that “Einstein often used the word ‘God’ as a metaphor for something that may well have transcended [his words]” (1972, 94). Others, though, believed Einstein’s God was a metaphor not for the transcendent, but the mundane. Thus did Jammer argue (obscurely) that when Einstein questioned whether God could have created the world differently, his reference to God “was merely a manner of speaking” —perhaps, for Jammer, a mere metaphor for nature itself (1999, 124). Similarly, Frank believed that when Einstein referred to a dice-playing God (in connection with quantum-mechanical probabilities), the word “God” was used “only as a figure of speech and not in a theological sense” (1947, 285).

So, was Einstein—neither theist nor atheist—a pantheist? Was God, for Einstein, merely a metaphor for nature? In 1923, in answer to the question “What is your understanding of God?,” he wrote: “In common terms, one can describe [my comprehension of God] as ‘pantheistic’ (Spinoza)” —though in the same reply he also suggests that God is a superior intelligence that is *revealed* in (not identical with) the knowable world (Einstein 1923, 197; see also Calaprice 2011, 324).

In a 1929 interview, he was asked “Do you believe in God, the god of Spinoza?” His reply: the question “is the most difficult in the world. It is not a question I can answer simply with yes or no. I am not an atheist. I do not know if I can define myself as a pantheist. The problem involved is too vast for our limited minds” (Viereck 1930, 447)—though in the same interview he said: “I am fascinated by Spinoza’s Pantheism” (Viereck 1930, 448).

Absent careful definition, Einstein’s statements about pantheism, like those about God and mysticism, are liable to misinterpretation. But indirect statements such as the following (from the Einstein-Hermanns conversations) provide a clearer picture of Einstein’s views.

- (1) I no longer believed in the known God of the Bible, but rather in the mysterious God expressed in nature. (Hermanns 1930, 9)
- (2) I’m not interested in what God looks like, but in how the world he created looks. I can read the thoughts of God from nature. (Hermanns 1930, 27)
- (3) Nature is neither solely material nor entirely spiritual. (Hermanns 1943, 59)
- (4) This oneness of creation, to my sense, is God. (Hermanns 1943, 69)
- (5) We both may have mystical connections, but my God appears as the physical world. (Hermanns 1943, 71)
- (6) [Natural laws] reveal such an intelligence that any human logic falters in comparison. (Hermanns 1948, 83)

- (7) The God Spinoza revered is my God, too: I meet Him every day in the harmonious laws which govern the universe. (Hermanns 1948, 89)
- (8) The soul given to each of us is moved by the same living spirit that moves the universe. (Hermanns 1948, 94)
- (9) Your minister plucks God from man's soul, and I from nature. (Hermanns 1948, 110)

Einstein's God, like Spinoza's, is *manifest* in nature, *not* identical with it. For example, in (2) Einstein could have said that one could read *all* of God's thoughts from nature, but did not; in (4), he could have said that creation itself, rather than "this *oneness* of creation," is God; in (5), he could have said that God does not merely *appear as*, but *is*, the physical world.

Such comments were not restricted to the Einstein-Hermanns conversations. For example, we saw above how in 1923 Einstein referred to the revelation of a superior intelligence; in a 1927 letter he referred to "the infinitely superior spirit that reveals itself in . . . the knowable world" (Calaprice 2011, 325).

Was Einstein a pantheist? His renunciation of "a personal, anthropomorphic deity is not necessarily to abandon all thought of transcendence," writes Brooke; moreover, "there is in Einstein no simple identification of nature with deity" (Brooke 2006, 952–953).<sup>6</sup> As for Spinoza, if pantheism is the *identification* of God and nature, then Einstein was *not* a pantheist; if it allows for a God manifested in, but not identical to, nature (panentheism), then Einstein could be called a pantheist. If the question of Einstein's pantheism remains unclear, it is due less to unclarity in Einstein than unclarity in definition—and perhaps that is why Einstein treated the term with some delicacy.

#### THE WORLD AS CONCEPT

Einstein looked through the window and seemed to mumble more to the trees than to me, *I believe that I have cosmic religious feelings . . . I like to experience the universe as one harmonious whole.* (Hermanns 1943, 63)

An intellectual discussion of mysticism poses the seemingly impossible task of using ideas and concepts to discuss nonideas and nonconcepts. Indeed, the mystical experience itself is often described as one in which concepts, judgment, and differentiation fall away, to be replaced by the unity of which the mystic speaks.

Nowhere is this more evident than in Buddhism, where our perception of the world is seen as distorted by human-created constructs and concepts. The Buddhist seeks a liberation from the veil of *maya*, from our ordinary reality of concepts, judgments, and differentiation, by erasing

these distinctions at an intuitive, arational level which cannot be grasped intellectually.<sup>7</sup> Regaining this foreign yet ultimately natural vision is the ultimate goal of Buddhism, particularly Zen. Thomas Merton writes: "To define Zen in terms of a religious system or structure is in fact to destroy it—or rather to miss it completely, for what cannot be 'constructed' cannot be destroyed either" (1968, 3). D. T. Suzuki calls Zen "a spiritual world of nondistinction which involves achieving an absolute point of view." Buddhist "mindfulness" or awareness, writes Merton, "in its most elementary form consists in that 'bare attention' which simply *sees* what is right there and does not add any comment, any interpretation, any judgment, any conclusion. It just *sees*" (1968, 53).

What has this to do with Einstein? Exemplifying the positivistic philosophy of Einstein's time, Hans Reichenbach wrote: "The method of modern science can be completely accounted for in terms of an empiricism which recognizes only sense perception and the analytic principles of logic as sources of knowledge" (1949, 310). But Einstein found such views untenable. For him, positivism led to a prejudice consisting of "the faith that facts by themselves can and should yield scientific knowledge without free conceptual construction," a misconception arising "only because one does not easily become aware of the free choice of such concepts" (1949a, 49). Mach's positivistic epistemology, for example, "did not place in the correct light the essentially constructive and speculative nature of thought and more especially of scientific thought" (1949a, 21).<sup>8</sup> Einstein argued in some detail that concepts are a necessary but often overlooked part of science (1953), even defining science itself as "the attempt at the posterior reconstruction of existence by the process of conceptualization" (1941).

In fact Einstein believed concepts were indispensable to thinking generally: ". . . all our thinking is of this nature of a free play with concepts; the justification for this play lies in the measure of survey over the experience of the senses which we are able to achieve with its aid" (1949a, 7). Moreover, ". . . thinking without the positing of categories and of concepts in general would be as impossible as is breathing in a vacuum" (1949b, 674). Even fundamental concepts such as causality itself are human-formed, and *a posteriori*, that is, experience-based. "The system of concepts is a creation of man" and "all concepts, even those which are closest to experience, are from the point of view of logic freely chosen conventions" (1949a, 13).

The comprehensibility of the world—which Einstein calls "a miracle" (1936, 351)—arises from the order among our sense impressions, "this order being produced by the creation of general concepts, relations between these concepts, and by relations between the concepts and sense experience" (1936, 351). Indeed, "The totality of these connections [i.e., relations] . . . is the only thing which differentiates the great building which is science from a logical but empty scheme of concepts" (1936, 351–52).



But how, for Einstein, are these relations, these connections, to be established? Certainly not through logic alone, or even through logic coupled with observation: *not*, that is, through rationality. For Einstein, such a connection was “purely intuitive, not itself of a logical nature” (1949a, 13); similarly, “The connection of the elementary concepts of every day thinking with complexes of sense experiences can only be comprehended intuitively” (1936, 351). We shall never understand, claimed Einstein, the fact that the totality of our sense experiences can be put in order by means of thinking (1936, 351).

Still, that concepts and their connections with sense experiences may yield an understanding of the world need not imply that they can lead to a full and unadulterated grasp of reality—and Einstein recognized as much: “To sense that behind anything that can be experienced there is something that our minds cannot grasp, whose beauty and sublimity reaches us only indirectly: *this* is religiousness” (Sugimoto 1989, 113). Similarly: “We all dance to a mysterious tune, and the piper who plays this melody from an inscrutable distance—whatever name we give him—Creative Force, or God—escapes all book knowledge” (Hermanns 1930, 14).

Einstein—in accord with Buddhism—recognized the concept-based nature of human knowledge, and the limitations of ordinary human perception and comprehension. For Einstein, that was the world we inhabit; for the Buddhist, it is the starting point from which to seek an experience of reality not filtered through concepts and categories. I imagine Einstein would have seen the Buddhist elimination of concepts as a Herculean, perhaps even impossible, task. Yet Einstein *did* seek “to experience the universe as one harmonious whole.” And he lauded Galileo, Kepler, and Newton, who “devoted their lives to proving that the universe is a single entity” (Hermanns 1943, 66). The parallels with mysticism are clear, but one should not thereby deem Einstein a mystic: his unity stems from an intellectual, concept-based comprehension of the cosmos; the Buddhist’s, the mystic’s, from the elimination of just such concepts and categories. Still, Einstein seemed to realize that a full experience of reality cannot be had within our ordinary, purely conceptual framework.

Einstein’s references to the power of science and to his admiration and awe for the natural world do not equate, then, to a belief that there can be nothing beyond that world, or that through science or rationality we may know all that is. Thus did he speak of an infinitely superior spirit, an infinitely superior intelligence, and a piper who plays “from an inscrutable distance.” When asked by rabbi and Talmudic scholar Chaim Tschernowitz whether “we shall ever probe the secret,” Einstein replied: “The real nature of things, that we shall never know, never” (Tschernowitz 1931, 50).

Such views are consistent with Einstein's philosophical allies, Spinoza and Schopenhauer. Spinoza's God was beyond human comprehension. Schopenhauer—deeply sympathetic to Buddhism, and its goal of personal, nonintellectual liberation—believed that ideas may be “only the outer side of existence, something secondary, supplementary” (Hollingdale 2004, 58).

Einstein evinced a belief that our experience and understanding of the world is based on concepts and their connections to sense experiences, and an admiration for the insights attained by exploiting this concept-based ground of experience through science—and yet he recognized that, in the end, we cannot fully penetrate the mystery before us.

#### INTUITION, ARATIONALITY, AND EMOTION

*Intuition*, defined as “immediate apprehension by the mind without the intervention of reasoning, [also] direct or immediate insight,” is evidently a type of arational knowledge. Mysticism apparently entails intuition, though intuition need not be mystical. Einstein believed that the connections between concepts and sense experiences could only be formed intuitively. Did this exhaust his resort to intuition and arationality?

For Einstein, intuition was indispensable to progress in fundamental science. Hints of his break with positivism and his placing of intuition as central to scientific progress appear as early as 1914 (Einstein 1914). By 1918, the unique role of intuition was clearly stated: “The supreme task of the physicist is to arrive at those universal elementary laws from which the cosmos can be built up by pure deduction. There is no logical path to these laws; only intuition, resting on sympathetic understanding of experience, can reach them” (Einstein 1918).<sup>9</sup> And again, in 1919: “The really great progress of natural science arose in a way which is almost diametrically opposed to induction. Intuitive comprehension of the essentials about the large complex facts leads the researcher to construct one or several hypothetical fundamental laws” (Einstein 1919). And in 1948 we find: “. . . causal methods in physics are not enough to explain the laws of the universe. My concept about relativity had to do with my feeling [intuition] rather than my intellect” (Hermanns 1948, 104).<sup>10</sup>

To be sure, these remarks apply to intuition in fundamental natural science—not to an intuition of God, transcendence, or some mystical view of reality. Still, for Einstein intuition is not something to be scoffed at or grudgingly accepted, but the prime requisite of fundamental scientific discovery. Moreover, he *does* refer elsewhere to the essential role of intuition generally.

- (1) I believe in intuitions and inspirations. I sometimes *feel* that I am right. I do not *know* that I am. (Viereck 1930, 446)

- (2) . . . it is intuition that improves the world, not just following the trodden path of thought . . . (Hermanns 1930, 16)
- (3) The basis of true thinking is intuition . . . reading books or gathering facts has never led to any scientific discovery. Intuition is the prime factor in our achievements. (Hermanns 1943, 70)
- (4) One never goes wrong following his feeling . . . I don't mean emotions, I mean feeling, for feeling and intuition are one. (Hermanns 1948, 95)
- (5) . . . our faculties are dull and can only comprehend wisdom and serene beauty in crude forms, but the heart of man through intuition leads us to greater understanding of ourselves and the universe. (Hermanns 1948, 109)
- (6) There will come a point . . . where only intuition can make the leap ahead . . . one can never know why, but one must accept intuition as a fact (Hermanns 1954, 137).

Intuition is one form of arationality, but in a 1941 essay Einstein directly addresses arationality in religion: “a religious person is devout in the sense that he has no doubt of the significance and loftiness of those superpersonal objects and goals which neither require nor are capable of rational foundation.” In that essay, Einstein explicitly counts Buddha and Spinoza as religious persons, so it is clearly with respect and admiration that he speaks of objects and goals that do not require, *and are not capable of*, rational foundation (though Spinoza's *method* was clearly based on reason).

And what of emotion, that untidy side of human nature which some might view as thoroughly divorced from—even opposed to—science? That Einstein as a young man was emotional and passionate is now well known. Yet even in maturity the image of Einstein as cerebral and detached—the image that fills the popular (and scientific) imagination—is one-dimensional.<sup>11</sup> Did he in fact disdain the emotional side of human nature?

In conversation with Hermanns, Einstein remarked that Spinoza “tells us of the importance of understanding our emotions and suggests what causes them. Man will never be free until he is able to direct his emotions to think clearly” (Hermanns 1930, 26). And later: “What a betrayal of man's dignity. He uses the highest gift, his mind, only ten percent, and his emotions and instincts ninety percent” (Hermanns 1930, 31).

Context is significant here: it is 1930 Berlin, the strains of National Socialism have risen to a high pitch, and life is becoming untenable for German Jewry. And this setting—in which the dominance of emotion over intellect is approaching a crucial juncture—is integral to the conversation. Still, Einstein does not advocate *eliminating* our emotions, but *directing* them; he laments not our *use* of emotions and instincts, but their *dominance*.

The circumstances of Einstein's final conversation with Hermanns were very different. It is Princeton, 1954, and Einstein is nearing the end of his life's journey. "Emotional responses don't lie; intellectual ones often do," he tells Hermanns. "But a combination of the two are like two eyes to view the clear picture" (Hermanns 1954, 119). Though these remarks clearly differ in tone from those of 1930, the recognition that we need *both* intellect and emotion remains.

In a 1927 letter Einstein referred to his "deeply emotional conviction of the presence of a superior reasoning power" (Calaprice 2011, 325). But perhaps his highest tribute to emotion occurs in the 1930 essay "Religion and Science."<sup>12</sup>

I maintain that the cosmic religious feeling is the strongest and noblest motive for scientific research. Only those who realize the immense efforts and, above all, the devotion without which pioneer work in theoretical science cannot be achieved are able to grasp the strength of the emotion out of which alone such work . . . can issue.

Here, in one of his most deliberate statements, Einstein tells us that the sort of fundamental science to which he devoted his life can issue *only* from emotion. Again, Einstein frames emotion not as the enemy of rationality, but its complement, both being required—emotion for motivation, rationality for implementation—to reveal the "wisdom and serene beauty" of the universe.

#### COSMIC RELIGIOUS FEELING

Einstein to a Princeton student: "You tell Dr. Goheen that you can learn just as much about God from physics as from the New Testament" (Smith 2009).<sup>13</sup>

Written explicitly for the *New York Times Magazine*, "Religion and Science" (Einstein 1930) may be Einstein's best known statement on religion. Surely he knew it would enjoy widespread circulation and scrutiny, and presumably it was crafted so as to represent his views accurately; in it, he outlines three stages of religious experience.

The first and most primitive stage is a religion of fear, in which "the human mind creates illusory beings more or less analogous to itself on whose wills and actions . . . fearful happenings depend. Thus one tries to secure the favor of these beings by carrying out actions and offering sacrifices which . . . propitiate them or make them well disposed toward a mortal."

The second stage is moral religion, wherein God "protects, disposes, rewards, and punishes." This God "loves and cherishes the life of the tribe or of the human race, or even life itself." He provides comfort "in sorrow and unsatisfied longing," and "preserves the souls of the dead." Yet "all

religions are a varying blend of both types,” and common to all is “the anthropomorphic character of their conception of God.”

But, writes Einstein, there is a third stage of religious experience, which he calls “cosmic religious feeling.” Although Einstein tells us—in language worthy of the mystic—that “It is very difficult to elucidate this feeling to anyone who is entirely without it,” he nevertheless outlines its key elements.

The individual feels the futility of human desires and aims and the sublimity and marvelous order which reveal themselves both in nature and in the world of thought. Individual existence impresses him as a sort of prison and he wants to experience the universe as a single significant whole.

This *need* not describe the mystic’s inner journey—but one can hardly discount the parallel between Einstein, who describes the desire to experience the universe as a unity, and the mystic, who claims to have already done so.

This cosmic religion, characterized by cosmic religious feeling, was Einstein’s religion—and in “Religion and Science” we are given additional clues as to just what it is. As already seen in “Einstein on Mysticism” above, at an early stage of development its beginnings appear in “many of the Psalms of David and in some of the prophets,” while “a much stronger element” appears in Buddhism.

And who has experienced this cosmic religious feeling? “The religious geniuses of all ages have been distinguished by this kind of religious feeling.” Moreover, “it is precisely among the heretics of every age that we find men who were filled with this highest kind of religious feeling and were in many cases regarded . . . as atheists, sometimes also as saints. Looked at in this light, men like Democritus, Francis of Assisi, and Spinoza are closely akin to one another.”

Einstein said much the same to Hermanns: “The true religious genius has always been endowed with this sense of cosmic religion, and was considered a heretic because he needed no dogma, no priestly caste, no humanized God. Some of the psalms and some Buddhist literature breathe this cosmic religion; so does the heathen Democritus, the Catholic St. Francis of Assisi, the Jew Spinoza” (Hermanns 1943, 68).

Clearly, Einstein is not limiting his cosmic religious feeling to scientists, or to those who trust only logic and the laws of nature. A religious genius, a heretic, an atheist, a saint: none is a conventional practitioner of any religious tradition. But what sort of person *is* so described? Certainly one sort is the mystic: whose inner vision often appears as religious genius; who often appears heretical because that vision is not constrained by accepted dogma or doctrine; who may be charged with atheism because the mystical experience of God is inexpressible, unnameable, and often divorced of anthropomorphism; and who, because of the purity of that vision and its manifestation in the world, can also appear as a saint. Clearly the mystic

has gone beyond Einstein's first two stages of religious experience and embarked upon some third stage.

Still, it is far from obvious that (as Einstein claims) Democritus, Francis of Assisi, and Spinoza are closely akin to one another—in fact they seem very different—or that they were all possessed of cosmic religious feeling.

Democritus is an obscure figure: little of his original work survives, much of our knowledge of him having been communicated by later authors. Moreover, substantial disputes have arisen regarding authorship of what does exist (Berryman 2010). Best known as one of the original atomists, Democritus (along with the even more obscure Leucippus) proposed that the world is composed of small constituents: atoms. Could atomism explain Einstein's affinity for him? Probably not: the atomism of Democritus was *very* different than that of modern physics. Democritus was, however, something of a heretic, proposing that the world operated according to natural law, rather than via Aristotelian "cause."

Spinoza, we know, dispensed with an anthropomorphic God, and was thus considered both a heretic and an atheist. He, too, argued for the unexceptional operation of natural law, yet maintained that a quite real God exists.

If Democritus and Spinoza again suggest associating Einstein with pantheism, Francis of Assisi disabuses us of any such notion. One of the most beloved of Christian saints, Francis always operated within the strictures of the Catholic Church. Still, he was far from conventional, taking selflessness and his love of "Lady Poverty" to new levels. While not heretical *per se*, this did on occasion offend the Church establishment.

It is remarkable that Einstein chose Francis as an exemplar of cosmic religious feeling. Often referred to as a mystic by serious scholars of Christianity, his was an essential mysticism, characterized by a spiritual vision, an inner journey—not by supernatural powers or miracles (Cunningham 1972). Very much a theist, he also loved nature: which is to say that he loved not physical law (as yet undiscovered), but the living creatures of nature. Describing himself as *ignorans et idiota* (Cunningham 1972, 141)—ignorant and an idiot—Francis was no dispassionate scholar motivated by abstract thought, which he rather despised, but a very human saint whose life was filled with love for his God and for those creatures, human and not, who surrounded him.

Einstein's juxtaposition is curious: Democritus, the nonconformist Greek whose pantheistic admiration of nature required no God; Francis, the devout, unlearned Christian often called a mystic, who believed in life after death, whose God was Christian, and who loved nature not as abstract law, but for each creature within it; Spinoza, the quietly rebellious Jewish thinker who—like Einstein—denied a personal God, yet saw God reflected in the abstract structure of the universe. These men were very different—yet each was, in a sense, a rebel who followed his own lights

rather than the direction of any religious or social institution; each had a profound connection to nature; and each, for Einstein, was an exemplar of cosmic religious feeling.

#### UNDERSTANDING EINSTEIN

The certainty with which we can reconstruct Einstein's view of mysticism from a limited historical record cannot approach that of rigorous scientific results. Yet a compelling case can be made.

Einstein, like Schopenhauer, sought denial of the self—not merely as an ascetic exercise, but to achieve liberation. Late in life, Einstein wrote that even in youth, contemplation of the physical world, a world independent of humanity, “beckoned like a liberation [*eine Befreiung*]” (1949a, 5). But this was no mere youthful idealism, for in 1931 Einstein declared that “The true value of a human being is determined primarily by the measure and the sense in which he has attained liberation from the self” (1934a, 245). And again, in 1941, we find that a “religiously enlightened” person has largely “liberated himself from the fetters of his selfish desires” (Einstein 1941).<sup>14</sup>

The goal was liberation—freedom “from the chains of the ‘merely personal’, from an existence which is dominated by wishes, hopes and primitive feelings” (Einstein 1949a, 5). And this goal became manifest not only in Einstein's words, but in his life: in the freedom to hold scientific convictions that led to estrangement from mainstream physics; in that essential aloneness that underlies the enduring image of Einstein the man.

Was Einstein a mystic? His rejections of that label could be discounted on the grounds that he typically (though, as in “Einstein on Mysticism” above, not exclusively) used terms such as “mystic” and “mysticism” in a supernatural, nonessential sense—leaving room for Einstein the essential mystic.

Nevertheless, I believe Einstein was *not* a mystic. Despite the widely variant nature of the mystic's experience, conditioned by historical context and the social and religious milieu of the mystic, there are common threads. One is that the mystical experience entails something ineffable, something immune to intellectual analysis, something very different than our ordinary experience of reality. I do not find in Einstein a claim to such an experience.

The genuine mystic is never someone who merely thinks certain thoughts, performs certain rituals, holds certain beliefs, or feels certain feelings. The genuine mystic has undergone a personal journey of transformation by somehow experiencing the world in a fundamentally different way, yielding a fundamentally different person.

Einstein saw the conditioned nature of our perception of the world, and he recognized our inability to see through to the deepest level of reality. But that, for Einstein, was where it ended: “the real nature of things, that

we shall never know, never.” The infinitely superior spirit and intelligence manifest in the universe remains a mystery; the piper remains inscrutably distant. Einstein sets the stage for the mystic’s journey, but does not himself embark upon it.

Still, one need not *be* a mystic to find value in mysticism. And Einstein’s view of essential mysticism was, I believe, more nuanced, more subtle, and more sympathetic than suggested by a cursory examination, by mere appearance. Nowhere in Einstein have I found a rejection of essential mysticism. And though Einstein’s cosmic religious feeling, his own avowed religion, was not equivalent to essential mysticism, neither were the two in conflict. In perhaps his most important statement on religion, Einstein counted Francis of Assisi, often regarded as a Christian mystic, as an exemplar of cosmic religious feeling.

For Einstein, God was neither a metaphor for nature nor a personal entity that intervenes in human affairs. Einstein was in consonance with Schopenhauer and Spinoza: Schopenhauer, who eliminated free will, who sought a liberation from the fetters of this world by taming the *real* will—the will that controls *us*, who found himself in deep agreement with the mystical worldview of the East; Spinoza, who left no room for a personal God, yet found God manifested in—but never identical with—nature itself, and who, believing the ultimate could not be comprehended in human terms, refused to debase his God thus, personal sacrifice be damned.

In physics it is seductively easy to ask questions that are at best ill-posed, and at worst meaningless. What is the momentum of an electron? How much time has elapsed between two spatially separated events? These questions appear entirely reasonable—but the physicist recognizes them as susceptible to answers only in a limited sense; indeed, depending on context, they become meaningless.

What is mysticism: rational or irrational? Which is genuine: thought and logic, or intuition and emotion? Which was Einstein: theist or atheist? Which is correct: science or mysticism? False and unnecessary dichotomies, all.

“Physics,” wrote Einstein “is an attempt conceptually to grasp reality as it is thought independently of its being observed” (1949a, 81). And might we not say that mysticism is an attempt intuitively to grasp reality as it is felt independently of its being thought? To assume that two such attempts to grasp reality are necessarily in opposition is to impose upon them a false and unnecessary dichotomy. Perhaps, after all, *neither* constitutes the thing in itself—and perhaps Einstein would have taken satisfaction in that.

#### ACKNOWLEDGMENTS

I am grateful to Professors Peter Kosso, Ralph Baierlein, and Arne Hassing for reading early versions of this article. Prof. Hassing, in particular, made



many useful comments, as did an anonymous referee and *Zygon's* editor. Barbara Wolff of the Albert Einstein Archives provided valuable research assistance; Dr. Michael Mommert assisted with translation.

Finally, it was nearly 15 years ago, in a Chicago used bookstore, that my late wife suggested I buy William Hermanns's *Einstein and the Poet*. I was skeptical—would I really find such a book interesting?—but I bought it anyway, and this is a better article because of it. Your intuition was correct, Katherine, and lo these many years later, your influence survives.

## NOTES

1. An older approach to mysticism argues for a universality of the mystical experience; see, for example, Stace (1960, 9–29) and Underhill (1920, 1–24). This approach has been criticized in later work, for example in Katz (1978) and Keller (1978).

2. Dictionary definitions herein are from *The New Shorter Oxford English Dictionary*, Oxford University Press (1993).

3. In 1931 a Chicago Jewish weekly published “Theosophy Making Inroads among Jews of Iraq,” stating that “Iraq Jewry is facing its severest crisis in many years” (Sentinel 1931). Though a “nonreligious” Jew, Einstein supported Zionism and the Jewish people. Perhaps his condemnation of theosophy stemmed partly from a perceived threat to Jews.

4. Mühling (2011, 331), too, points out the difficulty of addressing Einstein's mystical sympathies absent a clear definition of mysticism (which Jammer does not provide).

5. Mühling (2011, 230), in contrast, finds that, while Einstein's cosmic religion enters the mystical (*die ins Mystische geht*), this is *not* reflected in Spinoza.

6. “It is impossible to understand Einstein,” concludes Brooke, “without reference to his subscription to an apophatic logic in which the transcendent is ultimately indescribable” (Brooke 2006, 953).

7. Similar descriptions of the mystical experience are found in the West as early as the Neoplatonists Plotinus (third century CE) and Pseudo-Dionysius (fifth to sixth century CE).

8. Positivism was closely tied to the so-called Copenhagen interpretation of quantum mechanics, which Einstein famously rejected—arguably due to his insistence that science be based not only on facts (measurements), but on concepts as well.

9. The elementary *laws* are obtained by intuition, but may be exploited, through deduction, to “build up” the cosmos.

10. This inadequacy refers to causal *research methods*, not to causality in physics itself (i.e., quantum mechanics).

11. A mature yet strikingly undetached Einstein appears in Born (1971, 18–19, letter 12).

12. Einstein says much the same nearly 20 years later in another carefully crafted essay (1948).

13. Goheen, a professor of classics at Princeton, reportedly replied (through the student) that “God reveals himself in history, not nature” (Smith 2013). The exchange occurred circa 1950.

14. As in “Intuition, A-rationality, and Emotion”, Einstein is clearly being positive here, with Buddha and Spinoza regarded as “religious personalities.”

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