

## Article

# What Is the ‘Unitive Mystical Experience’ Triggered by Psychedelic Medicines an Experience of? An Exploration of Aldous Huxley’s Viewpoint in Light of Current Data

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**Abstract:** A large body of research in the field of psychology currently points to a variety of therapeutic outcomes derived from psychedelically occasioned mystical experience. Moreover, additional research suggests that such benefits to mental and emotional well-being may depend directly upon the subjective mystical experience itself, rather than upon the substances that triggered it; for instance, research at Johns Hopkins indicates that higher scores on the MEQ30 or MEQ43 might be key predictors of larger therapeutic outcomes. However, the ‘elephant in the room’ often overlooked in psychological studies is this: What exactly is it about the content of the subjective experience that triggers such significant outcomes or, of deep interest philosophically speaking, *what might the mystical experience be an experience of?* Could it be that such experiences have a viable ontological referent instead of their being wholly subjective and if so, how might Aldous Huxley’s theory in this regard be weighed in light of current data? The essay includes close discussion of the debate regarding the nature of mystical experiences between Robin Carhart-Harris’ REBUS model (the experiences are wholly subjective, with no ontological referent) vs. Edward Kelly’s ROSTA model (contending an ontological referent need not contradict the science). The essay’s thesis is that Huxley’s viewpoint includes plausible and perhaps valuable insights that may help explain why and how that encounter has such profound therapeutic value.

**Keywords:** Aldous Huxley; psychedelic substances; mystical experience; perennial philosophy; Mind at Large; Edward Kelly; Overview Effect



**Citation:** Sawyer, Dana. 2022. What Is the ‘Unitive Mystical Experience’ Triggered by Psychedelic Medicines an Experience of? An Exploration of Aldous Huxley’s Viewpoint in Light of Current Data. *Religions* 13: 1061. <https://doi.org/10.3390/rel13111061>

Academic Editor: Sebastian Gäb

Received: 13 September 2022

Accepted: 1 November 2022

Published: 4 November 2022

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## 1. Introduction

“We may safely predict that it will be the timidity of our hypotheses, and not their extravagance, which will provoke the derision of posterity”. H.H. Price, Oxford philosopher, complaining over the materialists’ answer to the hard problem of consciousness.

In 1945, when Aldous Huxley published *The Perennial Philosophy*, scholars of the world’s mystical traditions, including comparativists, had at their disposal two primary sources of raw data: accounts from the traditional literature and interviews, when possible, with living mystics. However, numerous recent studies with psychedelic substances<sup>1</sup> have opened a third window on mystical states, and opened it wide. For instance, research projects at Johns Hopkins beginning in 2005 have revealed that subjects given psilocybin often experience a state of consciousness that is, phenomenologically speaking, indistinguishable from that of the traditional mystics—at least as broadly described (more on this later). Using a 30-point typology of mystical experience based on the work of W.T. Stace, Walter Pahnke and William Richards to determine the degree of ‘mystical’ content in the subject’s experience, Roland R. Griffiths, William A. Richards, Frederick Barrett and others have provided strong evidence that mystical states of consciousness can be occasioned, and studied, using psychedelics as a catalyst (Griffiths et al. 2006).

Reviewing numerous recent studies, there are several notable elements that emerge with reference to mystical states triggered by psychedelics. First, we know with relative

certainty—based on studies conducted by David Nutt, Anthony Bossis, Charles Grob and other researchers—that taking psychedelic substances such as psilocybin can trigger significant therapeutic outcomes, including treatment for alcoholism, OCD, depression, PTSD, and existential distress in terminal cancer patients (e.g., Ross et al. 2016). Second, we have substantial evidence that the substances may not cause these outcomes directly, the benefits arising from the subjective experience triggered by the substances rather than by the substances themselves (e.g., see Yaden and Griffiths 2021). That is, if a subject is not fully awake when the medicine is working, therapeutic benefits may not result (conversely, the opposite is true for drugs such as antibiotics that work regardless of whether someone is awake or not).<sup>2</sup> In fact, the subjective sense of illumination gained during a psychedelic session may be analogous to the “Overlook Effect” described by astronauts, including that the subjective experience is critical to achieving the Effect. Astronauts cannot merely be shot into space. Their sense of having a “God’s eye” view of reality, and its resulting benefit, derives directly from the experience of seeing the earth from space, not from simply being in orbit.

A third research finding pertinent to this essay is that even being awake during a psychedelic session might not be enough to eventuate therapeutic outcomes. Specifically, there is evidence that the higher a subject scores on the Mystical Experience Questionnaire (either the MEQ30 or the updated and expanded MEQ43), the greater the therapeutic effect (Johnson et al. 2019). The more the subject experiences such characteristics of mystical experience as *unity* (with all of existence), *noetic quality* (knowingness and a sense of reality), *sacredness*, *transcendence of time and space*, *ineffability*, *sense of awe*, etc., the richer may be the rewards. In summary, not only do psychedelic substances sometimes bring therapeutic benefit, but there is definite evidence that such benefit depends upon the discernible richness of the experience’s ‘mystical’ qualities.

Accepting this evidence as plausible if not proven, let us now address what on a philosophical level I see as the elephant in the room, which is: *what is the mystical experience (in this case occasioned by psychedelic substances) an experience of?* Is the object of the experience wholly mind-created and perhaps illusory or does the experience have as its referent something with ontological viability—i.e., something that *really exists*? Put another way, is the brain state that occurs on psychedelics triggered by opening to ‘something,’ as a neurological condition is also caused by opening one’s eyes to bright sunlight, or is the sense of something being there simply the epiphenomenon of a brain state? Which is the horse and which is the wagon? As we move forward in our investigation, I will ask the reader to keep in mind that though I am referencing scientific studies throughout this essay, I am offering a thesis related to the philosophy of mysticism, not a scientific study of my own. I have begun with the evidence from psychedelic studies simply because it raises a question that has been endemic to the academic study of mystical experience—however occasioned—for more than a century.

Looking at the question of which is the horse and which the wagon from the vantage point of psychology, a behaviorist might answer that it does not really matter. The behaviorist is interested primarily in positive changes in behavior, so if therapeutic outcomes arise, does it matter what the subject experienced or thought they experienced? The subject may report that they merged with a god or goddess, grokked the blueprint of the universe or touched the deepest regions of their soul, but all that principally matters is whether or not improvements in their actions follow. Furthermore, if we address the question of ‘What’s there?’ from the perspective of a philosophical materialist, an answer we’ve commonly witnessed (with reference to *all* mystical-type experiences, however arrived at) is that they are experiences of “nothing”. For them, the mystical experience triggered by psychedelics is simply a subset of a valueless category of human experience. Mystical experience is merely mental experience and its seeming ontological referent is a mind-created unicorn.

For the materialist, it’s enough to say that the subjective experience on psychedelics has a corresponding brain state, which, as we know, has been carefully mapped by such neurophysiologists as Franz Vollenweider, of the University of Zurich, and Robin Carhart-

Harris, of Imperial College London. Specific to our question, Carhart-Harris tells us that the psychedelic experience corresponds to a neurological state in which dormant areas of the brain have come alive, affording new psychological insights and behavioral outcomes. Furthermore, given that this enhanced neurological state has drawn lots of attention from the scientific community and media, materialists generally find in it the *cause* of the therapeutic outcomes. It is, in short, the horse. However, as logicians have warned us for centuries, “correlation is not proof of causation” (e.g., firemen are found at fires but that correlation does not prove they *start* the fires), so the true cause may actually be an ontological *something* that gives rise to both the subjective experience and the corresponding neurological output in the way, for instance, that apple pie is the cause of both the subjective experience “yummy” and its corresponding neurological state. In fact, to deny the possibility of an ontologically viable referent as the cause of mystical experience as materialists do on a priori grounds derived from their worldview is to deny out of hand the testimony of psychedelic experts in numerous traditional cultures, who have claimed for centuries that *something is there*. A dismissal of that possibility by materialists is not only hubristic but far from being a settled opinion among philosophers today.

## 2. Huxley’s Theory of What Is There

Huxley’s opinion, started clearly in *The Doors of Perception* (1954), was that his psychedelic experience did indeed have a viable ontological referent and cause. Specifically, Huxley believed he had experienced something akin to the *dharmakaya* of Buddhism (Huxley 1954, p. 18) which he considered analogous to Meister Eckhart’s “Godhead” (Ibid, p. 19) as well as the *Brahman* of Hinduism and the “Being of Platonic philosophy” (Ibid, p. 17). In short, he believed he had subjectively apprehended something that actually exists. Nine years earlier, Huxley had explained his theory of what mystics apprehend in his anthology of mysticism, *The Perennial Philosophy* (originally published in 1945). Out of all possible types of mystical experiences (and Huxley believed there are many), he was most interested in what he termed the “unitive knowledge” (Huxley [1945] 1970, p. 10), the experience of knowing the profound interrelationship between all things and the sense that all things—including oneself—are ultimately, on an ontological level, simply aspects of one thing.

Huxley, relying on views gleaned mainly from Hinduism and Mahayana Buddhism, but with numerous testimonies from western mystics as well, argued in his “minimum working hypothesis” that transcendent to physical reality there exists an unchanging, unmanifest field of pure being. This field, which Huxley equated with Meister Eckhart’s “Ground of God” and “Godhead” (Huxley [1945] 1970, pp. 12 and 25), exists outside the realm of time and space but includes time and space. It is transcendent to the physical world but also imminent *as* the physical world. Furthermore, since we, as physical beings in the world, arise—as does the world itself—from this undifferentiated Ground of Being, the essential nature of *our* being is non-different from the source of *all* being. We are like myriad waves on the surface of one great ocean, each subsumed at our root into the Oneness of the ocean itself, and interconnected at the surface in our mutual interdependence upon that ocean. Consequently, for Huxley, the ontologically viable object he theorized he had grasped during his first psychedelic session was the essential Being that makes all ontological objects viable. It was *the* Being at the root of all beings and therefore for him *the most ontologically viable object*. Huxley believed he was experiencing what Eckhart had termed the *Istigkeit* or “Is-ness” of the objects around him during his psychedelic experience (Ibid, p. 22), and since he too existed, and felt his existence originating from the common source of existence, Huxley believed he was experiencing his essential oneness with everything. He became one with whatever he looked at, discovering on the level of being itself that he was somehow sharing in its existence. “I spent”, Huxley wrote in *The Doors of Perception*, “several minutes—or was it several centuries?—not merely gazing at those bamboo legs [of a nearby chair], but actually *being* them” (Ibid, p. 22).<sup>3</sup>

After his psychedelic session, Huxley believed he had gleaned experiential evidence for his theory that human beings have a mostly latent ability to experience the fact that all things, including themselves, are really aspects of one thing that arises into multiplicity from an unmanifest Ground. Moreover, Huxley theorized that this Ground has *consciousness* as the key characteristic of its nature. Not only is the Ground the source of all Being but the source of all consciousness; in fact, it *is* consciousness. Huxley was mainly relying on Asian sources for this theory (a form of *idealism* involving *panpsychism*), but he recognized earlier writers in the west—such as Plotinus—whom he believed had espoused a similar viewpoint. Specifically, Huxley argued that Hinduism's *Brahman*, described as a field of pure consciousness, was analogous to what William James had termed the "mother-sea" of consciousness and Ralph Waldo Emerson had described as the "Over-Soul". Furthermore, Huxley, relying on this shared perspective, believed Henri Bergson, the French philosopher and psychologist, had been right to argue for what is commonly termed the "filter theory" of consciousness, in that all of us, due to our shared oneness with everything at the level of essential being and consciousness, are potentially what Huxley termed "Mind at Large" (Ibid, p. 23) and "Universal Mind" (Huxley [1945] 1970, p. 10). That is, our minds have an innate but rarely tapped capacity to overflow our usual limits of experience (our "filtered" view) into an experience of *Consciousness* at a cosmic scale. However, why, one might ask, do not we normally experience our minds in this way—i.e., as Huxley's Mind at Large? Furthermore, by the way, why would it matter anyway?

Huxley argued that Bergson—and William James and F.W.H. Myers (prominent founders of the field of psychology and psychical research)—had been correct that our minds usually function as reducing valves. We, as embodied beings, are creatures who must search for food and avoid becoming food, and as such we must focus not on all that exists at a cosmic level but on that which helps us to survive. Consequently, as Huxley put it, "To make biological survival possible, Mind at Large has to be funneled through the reducing valve of the brain and nervous system" (Huxley 1954, p. 23). Furthermore, since the function of the brain and nervous system is mainly eliminative rather than productive, we generally live inside a reduced view of reality. What we get out of the bargain is attention to the survival of our physical bodies but what we commonly lose is what mystics coach us to hold onto: that at the root of our being and consciousness, we are cosmic in proportion. We *be-long* to the universe, and we are capable of knowing that we belong most fully on an experiential level in those moments when we transcend our filtering mechanisms of mind. In other words, the mystics urge us to remember this capacity because it generates its own sort of "Overview Effect", allowing us to have the insight, in Huxley's words, that, "All is in all—that All is actually each" (Ibid, p. 26).

For Huxley, the wisdom of the mystics was in their binocular way of knowing the world. After having the *unitive mystical experience* or UME specifically, the mystics sensed they were simultaneously a discrete and transitory moment of creation and somehow also all that exists. Meister Eckhart had stated that the essence of his being and the essence of God's being were one and the same (quoted in Huxley [1945] 1970, p. 12), and Huxley saw therapeutic value in having that realization—both as a theory and as an experience. Plotinus had described the mystics' path as the "journey of the alone to the Alone", from the isolation of individual existence to the supreme identity of oneself with all Being, and that premise forms the basis of Huxley's view regarding the practical value of the "unitive knowledge". Touching back for a moment to mystical-type experiences occasioned by psychedelics, William Richards, a member of Roland Griffith's team at Johns Hopkins, has pointed out that "unitive consciousness" is common during clinical sessions; in fact, he devoted an entire chapter of his book *Sacred Knowledge* to the subject: "Some people call it 'homecoming,' Richards wrote. "A common verbal expression [while subjects are on psilocybin] is, 'Of course, it always has been this way,' often accompanied by feelings of joy and even laughter at the thought that one ever could have doubted or forgotten this fundamental sense of belonging in the universe" (Richards 2016, p. 60).<sup>4</sup>

### 3. A Sampling of the Consequences of Huxley's Perspective for Psychology

Returning to our original question, during the *unitive mystical experience* or UME Huxley believed the ontologically viable referent is Eckhart's "Ground of God", James' "mother-sea" of consciousness, Emerson's "Over-Soul", and Hinduism's *Brahman*—all roughly equivalent for Huxley. Furthermore, experiencing this level of reality, he believed, is so ontically significant as to generate the broad range of therapeutic outcomes that subjects commonly report following sessions with psychedelics (as the quote from Richards offers support). Consequently, Huxley considered that "Under a more realistic, a less exclusively verbal education", individuals would be permitted "as a sabbatical treat" to take "an occasional trip through some chemical Door in the Wall [beyond our blinkered view] into the world of transcendental experience" (Huxley 1954, p. 78). Furthermore, for a time, back in the late 1950s and 1960s, many intellectuals joined Huxley in both his viewpoint and enthusiasm. The details of that history have been spelled out many times before, for instance in Ben Sessa's *The Psychedelic Renaissance* (Sessa 2012), but the thread of what caused this embrace was the promise it afforded to theoretical psychology and psychiatry.

Huxley had reinforced the claims of Myers and James that the human psyche contains not only a *negative* unconscious, built up of repressed fears, desires and hurtful memories, but also a *positive* unconscious that rests fundamentally in our identity with Mind at Large, aka for Huxley, the Ground of Being. This positive unconscious could be awakened, informing our daily minds with the full story of what we are, opening the doors of perception to what Abraham Maslow called "self-actualization". Maslow, in his book *Toward a Psychology of Being* (1960), argued that humans have a hierarchy of needs, with Freud's basic drives for food, shelter and sex at the bottom of the pyramid and *self-actualization* at the top (Maslow 1962, pp. 152–57). Following the lead of Huxley and others, Maslow believed that neurosis and psychosis are not only generated by trauma and repressed content but by a frustrated desire to wake up to who we fully are on all ontic levels (Ibid, pp. iv and 193). After basic needs are met, *meta-drives* come into play (including the desire to love and be loved), and if these meta-drives cannot be fulfilled, frustration leads to anxiety, depression and self-destructive behavior. Hence, Maslow argued that finding ways to connect with the root of our being in *the Being* has therapeutic value because it reveals the deepest—but commonly unrealized—aspect of our nature. In short, it generates *well-being*.

Maslow termed time spent in this heightened state of awareness, outside the blinkered view of reality, "peak experience" (Ibid, p. 71), and he sought ways of producing peak experiences reliably. The result, he believed, would be highly therapeutic, and so he termed one form of such experiences "B-cognition Therapy", the "B" standing for "Being" (Maslow 1962, p. 74). While visiting the Esalen Institute in Big Sur, California, during the 1960s, Maslow encountered other psychologists and philosophers who had accepted the general theory Huxley had inherited from Bergson, Myers, and James, including most significantly, Stanislav Grof, Alan Watts, Walter Houston Clark, Frances Vaughan, Huston Smith, Ralph Metzner, Joseph Campbell, Richard Alpert (later Ram Dass), and Anthony Sutich. Embracing the view that the human psyche includes aspects that transcend the brain, and that the unconscious may have content that transcends the purely personal, these intellectuals formed the International Transpersonal Association, holding their first conference in Iceland, in 1972. Their work was voluminous and intriguing (even if largely unproven and sometimes dubious), and included Huxley's position that psychedelic substances afford an effective and reliable means for opening the "Door in the Wall", triggering Maslow's *peak experiences*.<sup>5</sup> Many in the academic community believed these intellectuals may have been onto something vastly important, not only as a therapeutic tool but also for (1) mapping the psyche and (2) catalyzing self-actualization in healthy persons. However, soon all research with psychedelic substances was prohibited by the American government, launching an unfortunate hiatus of formal exploration that lasted three decades.

The reasons for this prohibition are well known, having to do primarily with political and social issues, but with reference to the content of this essay, was it also because materialists had somehow shown that Huxley's theory was wrong? Is *that* what we now know? Is it that we're certain there is no Mind at Large or Ground of Being or other transcendent aspect of reality as a possible ontological referent and cause of unitive mystical experiences? Related to this, do we now know that our consciousness is not filtered by the brain but generated by it, with no transpersonal aspects to the psyche possible? The answer to these questions is unequivocally 'no.' *We do not know these things*. In fact, I am arguing that Huxley's theory may still have merit—for instance, by making more sense, philosophically speaking, of the therapeutic benefits that result from UMEs triggered by psychedelic medicines than the materialist position that no ontologically viable referent is apprehended. As has already been noted, the reason for dismissing Huxley's theory derives largely from the fact that it depends upon a transcendental or spiritual premise disallowed implicitly from within the materialist paradigm—a paradigm currently reigning in academia even among scholars of religion. "The unreality of the divine object, once only a premise of anthropology and sociology", Kimberley C. Patton of Harvard has observed, "is now taken so much for granted in the study of religion as to go virtually unchallenged" (Patton 2000, p. 154). Consequently, subjects reporting experiences of the "transcendent", "the spiritual", "the unitive" or "the metaphysical" during sessions with psychedelics are, the materialists tell us, likely having delusions—albeit delusions with possible therapeutic value.

#### 4. Returning to the Neurological Data and the Issue of 'Causation'

I have mentioned that correlation is not proof of causation, and with regard to what triggers mystical experiences (whether triggered by meditation, time spent in nature, psychedelic substances, etc.), some scientists today are open to the idea that a changed brain state may not be the catalyst. For example, Yaden and Newberg observe that, "because an experience has a physiological basis does not necessarily mean that it precludes other kinds of religious, spiritual, or otherwise non-physical causes" (Yaden and Newberg 2022, p. 74). Could it be that the cause of the enhanced subjective experience that may result in therapeutic benefits *does* relate to an ontological object—in the same way, for instance, that the text you're now reading is an ontological cause of the brain state you're experiencing? (Or is it that because you're now experiencing a neurological state correlated with your subjective experience, this text is not really in front of you?) To help clarify the issue, let us look more closely at Carhart-Harris' data and his theory that the brain state experienced on psychedelics is the cause of the benefits, rather than simply the neurological correlate of the subjective experience.

Carhart-Harris bases his causation theory on the understanding, well documented, that human beings are basically creatures of habit, often acting and thinking out of *habituation* or *automization* in ways that can easily be characterized as those of high-functioning sleepwalkers. This tendency to run on autopilot, Carhart-Harris explains, corresponds to what he, based on the work of others, terms the "default mode network (DMN)" (Carhart-Harris et al. 2012; and see also Eisenberg 2020), a neurological pattern of functioning he has, to his credit, carefully mapped. The brain routinely takes in information from the senses and then configures the data according to its established views of the world, allowing it to function efficiently by relying on earlier summations of what it encounters (creating another sort of filtering). Depending on previous beliefs and patterns of cognition, the brain, with little conscious input, can "make sense" of what's in front of it, filtering out the dross and uncertainty of thought and perception to form a familiar picture of the world. This is useful, of course—acting as a sort of shorthand—but what happens if the habits of mind and perception become not only deeply engrained but self-destructive, claustrophobic, or overly robotic? The answer is self-evident; it leads to dangerous, unproductive or overly repetitive (i.e., compulsive) behavior. Enter psychedelic therapy, Carhart-Harris coaches. During a session, the medicine weakens the influence of habitation by circumventing the DMN and

allowing other areas of the brain not only to become active but enter into conversation with each other. This expanded brain state then opens the subject to new thought processes and other possibilities of behavior, generating the benefits already described. Carhart-Harris has termed how it all works his “REBUS” model of causation, an acronym for “RELaxed Beliefs Under pSychedelics” (Carhart-Harris and Friston 2019).

This theory of causation, on the neurological level, is certainly compelling. We know with a degree of certainty that habits of perception, cognition and belief are sometimes transcended even after just one session with a psychedelic medicine, and the REBUS model has been explored and elaborated upon by other researchers. For instance, Amy Kuceyeski, a mathematician working at Cornell’s Neuroscience, Brain and Mind Research Institute, has reported that psychedelics can “flatten the landscape” of the brain, in that it normally operates inside the “hills and valleys of our prior beliefs”, but when these constraints are removed, “It allows us to move more freely and have more dynamic brain activity” (Kuceyeski in Sample 2021). Sharing such a view, David Nutt, a colleague of Carhart-Harris and professor of neuropsychopharmacology at Imperial College, has argued that this flattening of the mind’s barriers allows parts of the brain to communicate with each other in ways that it has not since childhood. “The whole process of child development and education”, Nutt has argued, “is to take your brain, which is extremely malleable, and force it to be like everyone else’s brain. Under psychedelics, you go back to a state where bits of the brain that have not spoken since you were a baby can cross-talk. It’s that increased connectivity that allows people to get new insights into old problems” (Ibid.).

Just before we get back to the question of whether or not psychedelic mystical experiences of the unitive sort—or any mystical experiences for that matter—have a possible ontological referent, let us note that the REBUS model is in close agreement with Huxley’s view of how psychedelics affect the brain. Huxley was prescient in claiming that psychedelics may occasion healthy experiences of a mystical sort, but also in claiming that they allow transcendence of the strictures of the robot mind or DMN—as REBUS makes clear. Huxley wrote in *Doors* that the medicine “lowers the efficiency of the brain as an instrument for focusing the mind on the problems of life” (Huxley 1954, p. 23), allowing other possibilities of awareness to unfold. However, Huxley then dropped his other shoe. If one’s entrenched mode of neurological functioning (the DMN), and its corresponding habits of belief and cognition, become relaxed, what might that reduced habituation allow to come through? Could this new brain state afford apprehension of referents of an unusual but ontologically real variety? Huxley believed it could—and that in his own case, it *had*—and such apprehension, he theorized, if it occurs at the highest ontic level (his “Ground of Being”), can nourish the full range of one’s being, causing broad therapeutic and personal growth oriented effects. This, of course, is only philosophical theory, but is there any evidence that it’s a viable position?

Where materialists contend that consciousness is an epiphenomenon of the brain, existing entirely because the brain generates it, Huxley, based on the views of James, Bergson and Myers, countered that the brain makes consciousness possible but does not directly generate it. Functioning in ways analogous to a radio, the brain is a biological machine that *receives* or *translates* consciousness rather than creating it. Huxley agreed with Bergson that consciousness transcends all material structures and that the amount of this universal field of consciousness that Huxley termed “Mind at Large” is a “measly trickle”, filtered down to us, in proportion to what’s actually there (Huxley 1954, p. 23). Therefore, today we have “two models of the brain and its relationship to the mind”, Jeffery Kripal of Rice University has observed, “both of which fit the neuroscientific data well enough: the reigning [materialist] production model (mind equals brain, full stop), and the much older but now suppressed transmission or filter model (mind is experienced through or mediated/shaped/reduced/translated by brain but exists in its own right ‘outside the skull cavity’)” (Kripal 2019, p. 47).

Carhart-Harris and others have applauded Huxley for his view of the psychedelic substances’ effect on the brain, relating it to their own view that the DMN filters out a great

deal of what we might otherwise think, perceive or feel, but these scientists are—from a Huxleyan perspective—confusing correlation for causation, seemingly, at least in some cases, finding no reason to explore the possibility of a transpersonal and ontologically viable cause, despite the endless testimony of clinical subjects on psychedelics telling them that ‘something was there.’ Why, if the cause of the therapeutic outcomes is simply a reconfigured brain state, do the substances routinely trigger experiences of ‘God,’ ‘the sacred,’ ‘ultimate reality,’ ‘the fundamental unity of all things,’ ‘the transcendent,’ ‘divine love,’ ‘infinite soul,’ and other postulates of a transcendent or spiritual nature? Why the consistency? Furthermore, why must these testimonies, so much alike those of the traditional mystics, be disregarded? And if they were not disregarded, what might another explanatory model, referencing the same neurological data, suggest about causation? As we begin on this point, it’s important to be fair in acknowledging that proving an ontologically viable referent of a cosmic and transcendent nature is a daunting—if not entirely impossible—affair that we are never likely to see. However, that aside, is there evidence of a filter model of consciousness that might allow its possibility—and therefore the possibility of Huxley’s position?

### 5. Edward Kelly’s ROSTA Model

In a series of three landmark volumes, Edward Kelly, research professor in the Department of Psychiatry and Neurobehavioral Sciences at the University of Virginia, has edited and published more than sixteen hundred pages of evidence and theory supporting several filter/transmission theories of consciousness, taking seriously the possibility that consciousness has an ontological source transcending the brain. In these volumes, Kelly is joined by a cadre of contributors, including physicists, philosophers and neurophysiologists, analyzing the data from a range of disciplines, and supplying evidence of their shared view that the materialist paradigm is inadequate for explaining consciousness. Specifically, the materialist paradigm only has a chance of describing the nature of the conscious mind (and perhaps the cause of therapeutic benefits from psychedelic substances) if we ignore huge areas of human experience and a “range of well-evidenced empirical phenomena” (Kelly et al. 2015, p. 498, see also Kelly and Kelly 2007, pp. 542–53). In *Irreducible Mind* (2007), Kelly shares that he is unwilling to discard out of hand mystical experiences, however occasioned, or their possible ontological referents just because they do not fit the dominant academic paradigm of materialism. He tells us, “collection of new data should be by far the highest priority until we really know something about what is going on in these unusual individuals and states” (Kelly and Kelly 2007, p. 572). Furthermore, he adds, “Mysticism has largely been ignored by mainstream psychology and philosophy for most of the past century. [ . . . But] it is an incontrovertible and empirically grounded fact that the mystical domain comprises large numbers of real human experiences, experiences, moreover, which are often uniquely powerful and transformative” (Ibid, p. 573). Consequently, Kelly argues he and his colleagues have analyzed more of the raw data than materialists allow, arriving—cutting to the chase—at the view that Carhart-Harris and others have been overly reductionistic in their assessments. Taking into account a range of mystical experiences, including not only unitive experiences but near death experiences (NDEs), psychic phenomena, savant and genius phenomena, etc., Kelly controverts the premise that a brain state is either necessarily the cause of consciousness or more than a correlate of the ‘something’ experienced by mystics, including those who have arrived at their experience via psychedelics.

In *Beyond Physicalism* (2015), in his (and David Presti’s) chapter titled “A Psychobiological perspective on ‘Transmission’ models”, Kelly argues: “Most fundamentally, for Carhart-Harris and Friston as for all other reductive physicalists [an alternate term for materialists] it is simply axiomatic that anything unusual that enters the mind during these altered states of consciousness *must* come from somewhere else in the brain. However, that axiom is falsified, we submit, by the existence of psi phenomena and mystical-type NDEs occurring under physiologically extreme conditions, among other things. Our alternative

view is therefore that at least some of the relevant properties and capacities actually must come from somewhere else—Myer’s subliminal or James’s B-region of the mind—and that what Carhart-Harris and Friston and other mainstream workers are really doing is to help to elucidate the brain conditions under which these openings occur” (Kelly et al. 2015, p. 148).<sup>6</sup>

In the final chapter of *Beyond Physicalism*, Kelly therefore offers an alternative theory to Carhart-Harris’ REBUS model for what causes transcendent openings and their possible therapeutic benefits. He suggests a class of models generated by a range of filter/transmission theories. His umbrella term for this class is ROSTA, an acronym for “Resonant Opening to Subliminal and Transpersonal Assets” (Kelly et al. 2015, p. 496), which Kelly prefers to REBUS for the simple reason that it includes analysis and exploration of *all* available data related to mystical states of consciousness, not just those that do not threaten the materialist paradigm. Furthermore, in this regard he has gleaned support from several experts on mystical experience, including Jeffery Kripal of Rice University (Kripal 2019, p. 86) and Paul Marshall, a leading comparativist of mystical states. For instance, Marshall reinforces Kelly’s view that filter theories generally make better sense of all the data, concluding, “The intersection of biology, psychology, and metaphysics in mystical and other altered states affords opportunities for fruitful research. Filter theories are of great interest in this respect because they are situated at the intersection, bringing together neuropsychology in the shape of the filter with a subconscious that in its further reaches has metaphysical depths, as the data of mystical experience strongly suggest” (Marshall 2015, p. 73).

Kelly’s ROSTA model, one may note, can easily accommodate Carhart-Harris’ REBUS position, that beliefs are indeed relaxed during sessions with psychedelics, but it also takes seriously that consciousness may be filtered rather than generated by the brain, which opens up the possibility that something really is ‘there’ during mystical experiences. In *Beyond Physicalism*, Kelly writes: “The central commonality . . . and the key shift away from the production models, opening up new horizons of human possibility, involves their recognition of a tremendous *something*, what William James in *The Varieties of Religious Experience* called ‘the more,’ underlying the physical and mental dimensions of everyday experiences” (Kelly et al. 2015, p. 495). ROSTA acknowledges the brain’s place in the process of translating the experience of the ontological ‘something’ but does not attribute causation to the brain.

And what if Kelly’s model is the more accurate? Then, not only is Huxley’s theory (and several others) regarding the nature of ‘the more’ possible but it offers an explanation for Kelly’s “resonant openings” of “transpersonal assets”. Huxley believed that during the UME specifically, mystics open to that level of their being which they share with all Being, affording them, as we’ve discussed, an “Overview Effect” based on travel to inner space rather than outer space (far less costly, by the way). This deep plunge into transpersonal Being—which Huxley interpreted as the most universal, and therefore *most transpersonal* level of the psyche—affords mystics, when they return, the binocular perspective on daily life that Huxley—and the transpersonalists mentioned earlier—have believed is the primary motor of self-actualization.

Materialists contend that reality has no metaphysical aspects, including the possibility of a Mind at Large or Ground of Being; that the psyche has no transpersonal elements, including the ability to apprehend that Ground of Being; and that mystics experience nothing ontologically real during their altered states of consciousness. If this philosophical position is accepted, therapists are put in the unenviable position of staying broadly supportive but largely mum when their patients tell them, “I experienced my oneness with all reality” or “I felt bathed in the presence of the Goddess” or “I melted into my soul”. Related to this, even if a materialist anthropologist is somehow sympathetic to the Huichol tribe of Mexico, a group who employ peyote as a psychedelic sacrament for insight, he or she must dismiss out of hand their belief that they have experienced Tao Jreeku, the “Sun God”, or anything else ontologically real. Such summary judgments against

these subjective testimonies are, Huxley and Kelly have argued, based more on cognitive dissonance with a materialist ideology than science. In their view, the discussion needs to be left open, in lieu of proof in one direction or another,<sup>7</sup> to allow more room for theory.

## 6. Directions for Future Enquiry Regarding UMEs

It's important to note that though mystical experiences of the unitive type commonly occur in both the mystical literature and session reports from psychedelic research (and have been noted by Huxley, Grof, Kripal, Marshall, Kelly, Richards, Yaden, Newberg and others), none of these theorists has argued there is only one sort of mystical experience (either that all mystics describe one and the same experience or that the UME is the only possible mystical experience). Huxley specifically argued for a range of experiences, including "visionary experience" and various *psi* phenomena (see, for instance, *Heaven and Hell*, Huxley 1955). As noted earlier, Huxley interpreted the ontological "something" of UMEs to be *Being* and *Consciousness* at a cosmic scale. Furthermore, if Huxley's theory is correct, transpersonal assets of the positive unconscious may indeed be released during such experiences. However, Huxley interpreted these views as a beginning rather than an end, holding no settled opinions of his own. Huxley advised that in regard to such enquiry, we should practice what he termed "empirical mysticism", holding lightly our interpretations of various experiences while also acknowledging that they not only occur but have discernible value. If we accept Huxley's recommendation, what direction might our research take?

First, addressing the phenomenological level of enquiry, it's important to recognize there are at least several discernible types of mystical experience. Therefore, the Stace/Pahnke/Richards typology, measured by the MEQ30 or 43, is likely describing a broad territory of mystical experience with a range of subtypes; it identifies phenomenologically a category of experience that, on closer analysis, is plural rather than singular. Consequently, Joost Brecksema and Michiel van Elk, researchers into psychedelically occasioned mystical experiences at the University of Groningen, Netherlands, have suggested that scholars of non-ordinary states work together to generate "micro-phenomenologies" to explore "participant's lived experience in fine detail" (Brecksema and van Elk 2021, p. 1472). Taking seriously this directive, and recognizing that today we have a reliable means for triggering mystical-type experiences, it would be feasible to create such specific phenomenologies using data collected from session reports of living subjects. Moreover, behavioral psychologists may be able to track—or begin tracking—which types of mystical experiences, or characteristics of mystical experiences, have the greatest therapeutic outcomes for PTSD, OCD, depression, alcoholism, etc., though, admittedly, proving such trends would be a herculean task involving extravagant funding.

Sticking with the phenomenological parameters of inquiry for another moment, there is strong evidence from session reports today that Huxley's UME-type specifically has benefits. For instance, a thirty-one year old patient with terminal cancer reported in a recent study at Johns Hopkins: "The basic theme [of the psilocybin experience] that I perceived . . . was that life continues to go on and we are basically some form of essence from a Supreme Being and we are part of that Supreme Being" (Richards 2016, pp. 47–48). Furthermore, as evidence of having an Overview Effect or recalibration of perspective on life, the subject continued, "I don't have the fear of death that I once had" (Ibid, p. 48). However, additional micro-phenomenologies are likely necessary even with regard to UMEs, given that scholars have identified more than one type of this subtype of mystical experience.

In 1960, W.T. Stace described in *Mysticism and Philosophy* two primary kinds of UME—which he termed "extrovertive" and "introvertive" (Stace 1960, pp. 62 and 85)—extracted from his broad typology of mystical experience. Related to psychedelic UMEs specifically, William Richards has also identified these two types, though he prefers the terms "Internal Unity" and "External Unity" (Richards 2016, p. 59). Richards explains that a sense of Internal Unity arises when test subjects report an interior sense of oneness with everything, whereas External Unity relates to a feeling of being a resonant part of the world around them.

However, even here there is room for elaboration. In fact, Paul Marshall has pointed out that textual analysis reveals a great variety of unitive experiences (Marshall 2005, pp. 64–68; 2015, pp. 56–60). He argues that even if we focus exclusively on External Unity, we are able to discern such phenomenological subtypes as *integral unity*, *immersive unity*, *identificatory unity*, *incorporative unity*, *communal unity*, and *interconnective unity*. Consequently, if, using micro-phenomenologies, we were somehow to discover that Huxley was correct in believing the UME has the greatest therapeutic effect, we would still want to explore which type of UME—with its corresponding neurological state—is most efficacious. On the clinical level, this would be another daunting task, but this does not mean that preliminary reviews of session reports (and reports gleaned from scientific studies of long-term meditators) could not reveal patterns suggesting types—including types (for instance, involving encounters with “presences” and “entities”) that lie outside the UME category.<sup>8</sup>

Looking more closely into Marshall’s work for a moment, he points out, regarding the various subtypes of UME, that, “Many of the unities are not theoretically exclusive and could occur together as aspects of the same experience. For instance, the subject could simultaneously apprehend the world as a whole (*integral*), feel a part of that whole (*immersive*), have a sense of loving fellowship with other beings (*communal*), intuit connections between things (*interconnective*), and discern the grounding of things in a common origin (*source*). Although immersion and incorporation are logical alternatives, immersive and incorporative expressions do occur together: ‘I am a part of nature itself and it is a part of me—we are one’ . . . . There is no contradiction if different kinds of self are involved, with the ordinary self felt to be immersed in the world and a deeper self or consciousness felt to incorporate the world” (Marshall 2005, p. 64). With these possibilities in mind, it may be that the most beneficial variety of UME is not of a discrete type but rather that which includes the largest number of subtypes.

Returning to theory for a moment, Huxley would see this as likely, in fact, given that he believed whichever state of consciousness is most transpersonal (for him, that which most includes the Ground of Being) is most conducive not only to healing old wounds or breaking dysfunctional routines but for self-realization. For him, the ontic expansion experienced during UMEs is akin to what Stace termed a noetic apprehension of reality, wherein the subject, now open to a sense of self that incorporates more of what IS on a cosmic level, experiences an epistemic effect, a sense of *knowing*, that is direct and beyond the ordinary.<sup>9</sup>

Moving beyond phenomenological considerations and neurological correlates, while being careful not to exclude them, how else might philosophers and theoretical psychologists use session reports from psychedelic studies to explore Huxley’s UME and other mystical-type experiences, including their possible ontological referent(s) and the reasons for their therapeutic value? Reinvigorated by Kelly’s ROSTA model, they might resume where they left off in the early 1970s, for example by exploring theories of the psyche and its potentials. “First psychology lost its soul”, wrote Robert S. Woodworth, a primary student of William James, while looking back over his career, “then it lost its mind, [and] then it lost consciousness” (Woodworth 1921, p. 2). However, ROSTA opens the door to bringing these elements back into the discussion. Transpersonalists might gather together to formulate descriptions and typologies of self-actualized states, including C.G. Jung’s theory of “individuation”, to judge desired outcomes. They may also review and discuss models of the expanded psyche, including models already at their disposal, such as Stanislav Grof’s *The Holotropic Mind* (Grof 1993), Nick Herbert’s *Elemental Mind* (Herbert 1993), and Edward Kelly’s *Irreducible Mind* (Kelly and Kelly 2007).

How might psychedelically occasioned mystical experiences help reveal deeper aspects of who we are? Was Maslow correct that such “peak experiences” *do accumulate* in the individual, awakening levels of personal insight and emotional health from which we could each benefit? Will further research involving psychedelic substances suggest more strongly that the psyche has transpersonal layers?<sup>10</sup> Furthermore, is it possible these transpersonal layers might nest inside a deepest level of the psyche that is, as Huxley

believed, synonymous with the root of all creation? Kelly's ROSTA model, based on filter/transmission theory, invites us to explore the possibilities, while psychedelic studies offer fodder for analysis.

### 7. Regarding Religion Specifically

Referencing Huxley's UME, what will psychedelic studies suggest about its significance for organized religion? Will a spirituality centered on mystical experiences triggered by psychedelic substances eclipse those centered on faith and dogma or compliment them? Will it, in various instances, do both? Huxley viewed the UME as a thread running through the world's religions, though, as I have argued in detail elsewhere (Sawyer 2021), not as the essence or core of all religion—or even the core of mysticism. For Huxley, the religions themselves should each decide what their essence is, given that he had no interest in the matter. However, he thought he could locate the UME in each of them, however weighed (as valuable or valueless) by whichever religion's specific clergy and theology.<sup>11</sup> However, will members of religions that do not place a premium—or perhaps any positive value—on the UME agree with Huxley, either that their religion has a place for UMEs or that they see UMEs as a point of resonance across the religions? Currently, there is an on-going study at Johns Hopkins that may help answer these questions. Twenty-six clergy members from a range of religions are now finishing their participation in the "Religious Leaders Project", having each undertaken two sessions with psilocybin in a clinical setting, and having now met together to discuss their various experiences. Did they have UMEs—or other mystical-type experiences—and if so, how will they interpret the significance of these experiences for their personal lives and their faith traditions? Will their interpretations strongly diverge, each according to the dogma of their particular religion, or will there be points of resonance? Will there be philosophical speculations related to ontology and epistemology? Furthermore, what will scholars of religious studies make of these experiences and interpretations of the clergy? We have yet to find out, but it's deeply exciting to consider that now, when psychedelically occasioned mystical experiences can be reliably triggered, we have an opportunity to discuss the possibilities. In brief, and as I hope this essay makes clear, psychedelic studies are providing a rich source of additional data for the academic study of mystical experience.

**Funding:** This research received no external funding.

**Conflicts of Interest:** The author declares no conflict of interest.

### Notes

- 1 I have chosen to use the term *substances* instead of either "drugs" or "medicines" because the latter both have connotations, negative and positive, I'd rather avoid.
- 2 This is not yet a settled position.
- 3 Huxley would again share this ontic sense of knowing in his last novel, *Island* (Huxley 1962, p. 271), when the main character is being monitored during a session with a psychedelic substance:
  - 1 "Light", he whispered at last.
  - 2 "And you're there, looking at the light?"
  - 3 "Not looking at it", he answered, after a long reflective pause. "Being it. Being it", he repeated emphatically.
- 4 Note that David B. Yaden and Andrew B. Newberg also devote a chapter to experiences of "Unity and Ego-Dissolution", sometimes occasioned by psychedelics, in their just released book *The Varieties of Spiritual Experience* (Yaden and Newberg 2022, pp. 224–47).
- 5 Maslow himself wrote, "It looks as if these [psychedelic] drugs often produce peak-experiences in the right people under the right circumstances, so that perhaps we needn't wait for them to occur by good fortune" (Maslow 1964, p. 27).
- 6 Kelly and his contributors give their own detailed reasons for taking psi phenomena, NDEs, and other non-ordinary states of consciousness seriously (for example, see "Empirical Challenges to Theory Construction", in Kelly et al. 2015, pp. 3–38), but the reader might also note additional support in Cardena (2018) and Cardena et al. (2015), as well as support for the transpersonal possibilities of NDEs in the work of Charlotte Martial's research team at the University of Liege, Belgium (e.g., Martial 2021).

- <sup>7</sup> In terms of Huxley’s theory of ontology at a cosmic scale and consciousness’ relationship to it, the reader may note that several quantum physicists have drafted models that could accommodate it (e.g., Schrodinger 1946; Bohm 1980; Herbert 1993) as have several philosophers of mind and consciousness (e.g., Kastrup 2014; Goff 2019). In summary, these theorists join others in undermining materialism as a settled position.
- <sup>8</sup> With reference to the MEQ specifically, researchers talk in terms of “factors” or “subscales”, that perhaps could be correlated with Marshall’s “types”.
- <sup>9</sup> Huxley was influenced by the philosophy of Advaita Vedanta, which holds that ultimate reality is experienced by the human mind as sat-chit-ananda, “truth” (of the noetic variety), “consciousness” (of the Mind at Large sort), and “bliss”, due to the sense of liberation from being exclusively a speck in the universe.
- <sup>10</sup> Note that William Richards has already gone on record in this regard, claiming: “There are now sufficient data in the descriptive records of psychedelic researchers to consider Jung’s concept of the collective unconscious empirically validated” (Richards 2016, p. 80).
- <sup>11</sup> Note here that Huxley’s view has much in common with that of Perry Schmidt-Leukel’s (2017), that each religion may include many elements—including mystical states—from all religions but weigh the value of those elements differently.

## References

- Bohm, David. 1980. *Wholeness and the Implicate Order*. London: Routledge.
- Breeksema, Joost J., and Michiel van Elk. 2021. Working with Weirdness: A response to ‘Moving Past Mysticism in Psychedelic Science’. *ACS Pharmacology and Translational Science* 4: 1471–74. [CrossRef] [PubMed]
- Cardena, Etzel. 2018. The experimental evidence for parapsychological phenomena: A review. *American Psychologist* 73: 663. [CrossRef] [PubMed]
- Cardena, Etzel, John Palmer, and David Marcusson-Clavertz. 2015. *Parapsychology: A Handbook for the 21st Century*. Jefferson: McFarland.
- Carhart-Harris, Robin L., and Karl J. Friston. 2019. REBUS and the anarchic brain: Toward a unified model of the brain action of psychedelics. *Pharmacological Reviews* 71: 316–44. [CrossRef] [PubMed]
- Carhart-Harris, Robin L., David Erritzoe, Tim Williams, James M. Stone, Laurence J. Reed, Alessandro Colasanti, Robin J. Tyacke, Robert Leech, Andrea L. Malizia, Kevin Murphy, and et al. 2012. Neural correlates of the psychedelic state as determined by fMRI studies with psilocybin. *Proceedings of the National Academy of Sciences of the United States of America* 109: 2138–43. [CrossRef] [PubMed]
- Eisenberg, Sabrina. 2020. What is the Default Mode Network? *Psychedelic Science Review*. Available online: <https://psychedelicreview.com/what-is-the-default-mode-network/> (accessed on 18 November 2020).
- Goff, Philip. 2019. *Galileo’s Error*. London: Penguin.
- Griffiths, Roland R., William A. Richards, Una McCann, and Robert Jesse. 2006. Psilocybin can occasion mystical-type experiences having substantial and sustained personal meaning and spiritual significance. *Psychopharmacology* 187: 268–83. [CrossRef] [PubMed]
- Grof, Stanislav. 1993. *The Holotropic Mind*. New York: HarperCollins.
- Herbert, Nick. 1993. *Elemental Mind*. New York: Penguin.
- Huxley, Aldous. 1954. *The Doors of Perception*. New York: Harper & Row.
- Huxley, Aldous. 1955. *Heaven and Hell*. New York: Harper & Row.
- Huxley, Aldous. 1962. *Island*. New York: Harper & Row.
- Huxley, Aldous. 1970. *The Perennial Philosophy*. New York: Harper & Row. First published 1945.
- Johnson, Matthew W., Peter S. Hendrick, Fredrick S. Barrett, and Roland R. Griffiths. 2019. Classic psychedelics: An integrative review of epidemiology, therapeutics, mystical experience, and brain network function. *Pharmacology & Therapeutics* 197: 83–102.
- Kastrup, Bernardo. 2014. *Why Materialism Is Baloney*. Winchester: John Hunt Publishing.
- Kelly, Edward F., Adam Crabtree, and Paul Marshall. 2015. *Beyond Physicalism*. Lanham: Rowman & Littlefield.
- Kelly, Edward F., and Emily W. Kelly. 2007. *Irreducible Mind: Toward a Psychology for the 21st Century*. Lanham: Rowman & Littlefield.
- Kripal, Jeffrey J. 2019. *The Flip: Epiphanies of Mind and the Future of Knowledge*. New York: Bellvue Literary Press.
- Marshall, Paul. 2005. *Mystical Encounters with the Natural World*. Oxford: Oxford University Press.
- Marshall, Paul. 2015. Mystical Experiences as Windows on Reality. In *Beyond Physicalism*. Edited by Edward F. Kelly, Adam Crabtree and Paul Marshall. Lanham: Rowman & Littlefield, pp. 39–76.
- Martial, Charlotte. 2021. Near Death Experiences in the Public Debate: A scientific perspective. *ALIUS Bulletin* 5. [CrossRef]
- Maslow, Abraham. 1962. *Toward a Psychology of Being*. New York: Van Nostrand Reinhold Co.
- Maslow, Abraham. 1964. *Religion, Values, and Peak Experiences*. Middlesex: Penguin.
- Patton, Kimberley C. 2000. Juggling Torches. In *A Magic Still Dwells*. Edited by Kimberley C. Patton and Benjamin C. Ray. Berkeley: UC Press, pp. 153–71.
- Richards, William A. 2016. *Sacred Knowledge: Psychedelics and Religious Experience*. New York: Columbia University Press.
- Ross, Stephen, Anthony Bossis, Jeffrey Guss, Gabrielle Agin-Liebes, Tara Malone, Barry Cohen, Sarah E Mennenga, Alexander Belser, Krystallia Kalliontzi, James Babb, and et al. 2016. Rapid and sustained symptom reduction following psilocybin treatment for anxiety and depression in patients with life-threatening cancer: A randomized controlled trial. *Journal of Psychopharmacology* 30: 1165–80. [CrossRef] [PubMed]

- Sample, Ian. 2021. Acid test: Scientists show how LSD opens doors of perception. *The Guardian*. Available online: <https://www.theguardian.com/science/2021/may/19/acid-test-scientists-show-how-ld-opens-doors-of-perception> (accessed on 12 September 2022).
- Sawyer, Dana. 2021. Redressing a Straw Man: Correcting critical misunderstandings of Aldous Huxley's perennial philosophy. *Journal of Humanistic Psychology*, 1–29. Available online: <https://journals.sagepub.com/doi/abs/10.1177/00221678211024399> (accessed on 9 September 2022). [CrossRef]
- Schmidt-Leukel, Perry. 2017. *Religious Pluralism & Interreligious Theology (from His Gifford Lectures)*. Maryknoll: Orbis Books.
- Schrodinger, Erwin. 1946. *What Is Life?* Translated by L. Mazurczak. Bern: Francke.
- Sessa, Ben. 2012. *The Psychedelic Renaissance*. London: Muswell Hill Press.
- Stace, W.T. 1960. *Mysticism and Philosophy*. Los Angeles: Jeremy P. Tarcher.
- Woodworth, Robert S. 1921. *Psychology: A Study of Mental Life*. New York: Henry Holt. Available online: <https://www.scribd.com/document/27527241/Psychology-by-Robert-S-Woodworth> (accessed on 2 September 2022).
- Yaden, David B., and Andrew B. Newberg. 2022. *The Varieties of Spiritual Experience*. New York: Oxford University Press.
- Yaden, David B., and Roland R. Griffiths. 2021. The Subjective Effects of Psychedelics Are Necessary for Their Enduring Therapeutic Effects. *ACS, Pharmacology and Translational Science* 4: 568–72. [CrossRef] [PubMed]