
Consciousness Unbound

LIBERATING MIND FROM THE
TYRANNY OF MATERIALISM

Edited by
EDWARD F. KELLY
and PAUL MARSHALL

Properly advanced science and spirituality serve to strengthen
each other, and this *magnum opus* leads the way!

—EBEN ALEXANDER, MD

C O N S C I O U S N E S S
U N B O U N D

PRAISE FOR CONSCIOUSNESS UNBOUND

“Properly advanced science and spirituality serve to strengthen each other, and this *magnum opus* leads the way! This third book in a trilogy (so far!) offers a well-supported consolidation of empirical data and theoretical frameworks to help usher our world from the bleak and paltry fiction of physicalism into a far better-supported model of the universe in which mind is primordial and human will influences the universe-at-large. This masterpiece illuminates a rational path forward that will favorably support the best of human potential.” —**Eben Alexander**, MD, neurosurgeon and author of *Living in a Mindful Universe*, *Proof of Heaven*, and *The Map of Heaven*

“In this lucid and thought-provoking text (the third volume of a series initiated under the auspices of Esalen’s Center for Theory and Research), a stellar group of scholars from a multitude of different fields not only offer compelling empirical data that underscore the urgent need to radically reenvision the taken-for-granted metaphysical stance of physicalism/materialism that currently undergirds most scientific work but also provide a series of interrelated, and theoretically satisfying, metaphysical alternatives to ‘the tyranny of materialism.’ Read this book if you want to discover an intellectually rigorous middle ground between the fundamentalisms of both religion and science and believe that it is not only possible but also important to reconcile science and spirituality in a way that is thoughtful and empirically grounded.” —**G. William Barnard**, professor of religious studies, Southern Methodist University

“*Consciousness Unbound* is an ambitious and bold sequel to the pioneering volumes, *Irreducible Mind* and *Beyond Physicalism*. It both complements and successfully extends the earlier works’ assault on empirically and conceptually myopic physicalist efforts to account for the role of mind in nature. Acknowledging sensibly that no science is thoroughly empirical, it offers an intriguing buffet of alternative worldviews or metaphysical approaches. And it presents a thoughtful and multifaceted case for adopting some form of idealism. This book should be mandatory reading for those wrestling with these venerable issues.” —**Stephen Braude**, emeritus professor of philosophy, University of Maryland, Baltimore County

“Darwin offered his epoch-making hypotheses as a way of rendering intelligible a panoply of unexplained facts. Similarly, Edward F. Kelly, Paul Marshall, and their colleagues continue to develop, in this the third volume of a very important series, an impressive foundation for a nonmaterialistic view of mind and the universe. If you are a committed materialist, you should read this book to discover how much of what you take for granted should be questioned. If you are a committed nonmaterialist, you should read it for the same reason.” —**Etzel Cardeña**, Thorsen Professor of Psychology, Lund University

“I met Ed Kelly at an Esalen conference over twenty years ago. I was excited by his views on consciousness and have followed his project ever since. I now know many of his colleagues, and the more time I spend with them, the more I become convinced that mind and consciousness are not manufactured by brain processes and may therefore be capable of surviving bodily death. This is anathema to many scientists, despite their inability to explain many proven anomalies. But as the great epistemologist Count Korzybski wrote, ‘The territory is primary to the map.’” —**John Cleese**, writer, performer, “useful idiot”

“This is the third volume of an increasingly influential series. Its hallmark has been the contributors’ realization that the future of psychology and the neurosciences requires ditching many hitherto-favored assumptions, empirical and theoretical, and investigating certain ‘rogue’ phenomena and the new avenues to which they lead. Those who have read the preceding volumes will certainly wish to travel further with this one, and those who have not will find it an excellent starting place for some exceedingly interesting new explorations.” —**Alan O. Gauld**, emeritus professor of psychology, Nottingham University

“This marvelous read should stop all who continue to explain away the simple irrefutable fact that the universe is in some fundamental sense awakening to itself through the choices enlightened persons make. The rich documentation provided is the best critical overview of the scope and depth of the empirical and conceptual options for those who recognize this fact from their own experience.” —**Ralph W. Hood**, professor of psychology and LeRoy A. Martin Distinguished Professor of Religious Studies, University of Tennessee at Chattanooga

“Brains are not mindless. Mental causation and the ‘unmoved mover’ (free will) are not illusions. Human beings have a spiritual aspect. There is more to ultimate reality than just physical particles in fields of force. In *Consciousness Unbound*, a collection of disciplined scholars—scientists

and humanists—defend those propositions and argue that the scientific materialist account of what is really real is incomplete. If you have ever pondered the mysteries of the mind–body problem, *Consciousness Unbound* is the book for you.” —**Richard A. Shweder**, Harold Higgins Swift Distinguished Service Professor, Department of Comparative Human Development, University of Chicago

“*Consciousness Unbound* continues a potentially revolutionary interdisciplinary collaboration initiated by Esalen Institute’s Center for Theory and Research and scientists with the Division of Perceptual Studies at the University of Virginia. Showing us how to separate the wheat from the chaff in disputes concerning science and spirituality, this book tackles issues unjustly marginalized by Western psychology and philosophy and takes another step toward a robustly evidence-based transcendental framework of mind–matter relationships. *Consciousness Unbound* is mandatory reading for those tired of dogmatic assertions by theology, scientific orthodoxy, and popular New Age ideologies.” —**Andreas Sommer**, historian of scientific naturalism, curator of www.forbiddenhistories.com

“*Consciousness Unbound*—a rather grand title, yes, but it delivers on its promise. One of the major depressing parts of modern life is that we think science, our powerful system to advance knowledge, has somehow ‘proven’ that all spirituality and religion is nonsense and we are nothing but physical accidents, with no inherent meaning. Yet there is, unknown even to most scientists, excellent evidence that yes, the physical is important, but there is something more, something pointing at the spiritual, that we must take into account if we really want to be reasonably rational and scientific in the way we approach the world and our lives. Here’s an excellent overview of that evidence.” —**Charles T. Tart**, professor emeritus of psychology, University of California, Davis

“The unquestioning allegiance of mainstream science to the materialistic reduction of mind to brain has caused researchers to ignore empirical evidence that challenges this metaphysical belief. But the eminent physicist Richard Feynman reminds us that experimenters who remain true to the self-critical, open-minded ideals of science ‘search most diligently, and with the greatest effort, in exactly those places where it seems most likely that we can prove our theories wrong.’ The contributors to this book deserve great respect for adhering to this noble ideal and thereby embracing the theme of ‘truth prevailing over power.’” —**B. Alan Wallace**, physicist and Buddhism scholar/teacher, president of the Santa Barbara Institute for Consciousness Studies

“Consciousness Unbound provides a thoughtful and thorough examination of modern theories about the nonmaterial nature of the universe that are compelling alternatives to the reductive nature of scientific materialism. Each of these theories offers answers to conundrums that materialism cannot explain, such as the nature of near-death experiences, mystical experiences, cases suggestive of reincarnation, and psi phenomena such as precognition. Each chapter offers very engaging reading, and I found myself for the first time receiving a clear explanation of the roots and scientific bases of metaphysical theories such as idealism and dual-aspect monism, as well as their relevance for understanding the nature of the universe. I applaud the authors for making a heady subject accessible to persons of all disciplines. I highly recommend this book to all readers who see the real limitations of materialism, but who also want to know more about the scientific evidence and practical benefits of alternative worldviews regarding the nature of reality.” —**Marjorie H. Woollacott**, professor, Department of Human Physiology and Institute of Neuroscience, University of Oregon

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Tyranny of Materialism**

**Edited by
Edward F. Kelly and Paul Marshall**

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PREFACE

Michael Murphy

Since its founding in 1962, Esalen Institute has regularly sponsored research fellowships in fields that mainstream scientific and religious institutions typically neglect or avoid altogether. The present volume is the third major output of one especially productive fellowship of this sort that I initially organized in 1998 with the specific aim of presenting and discussing empirical evidence suggestive of postmortem survival—the persistence of aspects of human mind and consciousness following bodily death. It will probably surprise many, if not most, readers to hear that a large body of such evidence already exists, much of it of very high quality. Literally hundreds of thousands of pages have been published by able investigators, both in book-length treatments and in scientific reports in refereed journals, on topics such as children who seem to remember aspects of previous lives, near-death experiences occurring under extreme physiological conditions, crisis apparitions and hauntings, and apparent communications from deceased persons through the agency of mediums.

This fellowship became known to the Esalen community as “Sursem” (from “Survival Seminar”), but it soon evolved into something much broader in scope—essentially undertaking a systematic reassessment of the physicalist (or “materialist”) metaphysics that emerged over the past several centuries in conjunction with the rise of modern science and that has become the received wisdom of the opinion elites of all of today’s “advanced” societies.

A first book, *Irreducible Mind: Toward a Psychology for the 21st Century*, sought mainly to assemble in one place large amounts of evidence for a variety of “rogue” psychological and physiological phenomena that resist or defy explanation in conventional physicalist terms (including a number of topics previously visited in my own *The Future of the Body*). The next

book, *Beyond Physicalism: Toward Reconciliation of Science and Spirituality*, took a more theoretical turn and drew on a wide variety of historical and contemporary sources in an initial attempt to present and compare a sampling of richer metaphysical systems (or worldviews or conceptual frameworks) that specifically seek to accommodate phenomena of the sorts cataloged in *Irreducible Mind*.

This third volume of the series continues to develop the main themes of its predecessors, presenting new information regarding some of the most theoretically challenging empirical phenomena and a variety of additional worldviews or metaphysical positions potentially capable of making sense of them, plus reflections on what all this work may mean for contemporary scholarship in the humanities, science, and philosophy as well as for human affairs more generally.

I am hugely proud of this work, both for the light it has brought to its subject matter and for the way it does so. These explorations have necessarily relied on methods and discoveries from many fields, among them physics, neuroscience, depth psychology, dynamic psychiatry, metaphysics, the philosophy of mind, cultural anthropology, the history of science, the sociology of knowledge, comparative religion, meditation research, and the systematic collection of shamanic and contemplative lore provided by living spiritual teachers. As much as anything Esalen Institute has ever sponsored, I believe, this work contributes significantly to our understanding of human nature's higher reaches and destiny. I cannot resist an analogy between this body of work and the exploration of the Louisiana Purchase by Lewis and Clark and their "Corps of Discovery." Please join me in savoring this exciting new report from the undiscovered countries of human consciousness!

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Second, we thank the many colleagues from multiple disciplines—too numerous to name individually—who have participated in the meetings of our Sursem group and thematically related Esalen fellowships, and who helped shape the vision articulated in this series of books.

Third, we thank individuals who have supported the work financially through contributions to Esalen's Center for Theory and Research, including John Cleese, Deb Frost, Christina and Jim Grote, Mary Ellen Klee, Gary Owens, Jerry and Linda Patchen, and Sam Yau, as well as those who have facilitated Sursem and related meetings over the years through their administrative and organizational skills, including Steve Dinan, Frank Poletti, and Max Gaenslen. We are also very grateful to Bob Rosenberg for his meticulous work on the index.

Several publishers/individuals have kindly granted permission for use of material in the present book: Penguin Random House for permission to include in Chapter 3 an excerpt from *Cat's Cradle* by Kurt Vonnegut Jr.; Taylor & Francis for permission to reproduce in Chapter 5 a figure published in 2009 in Max Velmans, *Understanding Consciousness*; and Harald Atmanspacher for permission to reproduce in Chapter 10 a figure published in 2014 in the journal *Mind and Matter*. Full source details are provided in the text.

Last but certainly not least, we again thank Mike Murphy for initially conceiving this project, for bringing us together in the spectacularly stimulating environment of Esalen, and for his apparently limitless reserves of comradeship, wit, and wisdom.

BACKGROUND AND OVERVIEW

Edward F. Kelly

The rise of modern science, accompanied by many undeniable technological triumphs, has led to widespread acceptance among intellectual elites of a worldview that conflicts sharply both with everyday human experience and with beliefs widely shared among the world's traditional faiths.

Specifically, most contemporary psychologists, neuroscientists, and philosophers of mind subscribe explicitly or implicitly to some version of “physicalism,” the austere philosophical descendant of the “materialism” of previous centuries. On views of this sort, anchored in the classical physics of the late nineteenth century, *all* facts are determined in the end by physical facts alone. We human beings are nothing more than extremely complicated biological machines. Everything we are and do is explainable, at least in principle, in terms of our biology, chemistry, and physics—ultimately, that is, in terms of local interactions among tiny bits of matter moving in accordance with mathematical laws under the influence of fields of force. Some of what we know and our capacities to learn more are built in genetically as complex resultants of biological evolution. Everything else comes to us by way of our sensory surfaces, through energetic exchanges with the environment of types already largely understood. All aspects of mind and consciousness are produced by (or in some mysterious way identical to or supervenient on) neurophysiological processes occurring in our brains. We are “meat computers” (in artificial intelligence pioneer Marvin Minsky’s chilling phrase) or “moist robots” (in its *Dilbert* parody). Our everyday experiences of enduring and purposeful selfhood, seemingly supported by mental causation and at least some degree of free will, belong only to a prescientific “folk psychology”; in reality, these are just illusory by-products of the grinding of our neural

machinery. Postmortem survival of any sort is impossible, because mind and consciousness are entirely bodily products and will therefore be extinguished, totally and finally, by the demise and dissolution of our bodies. On a more cosmic scale, we see no final causes or teleological urgings in the evolution of manifest nature and no sign of any sort of transcendent order. The overall scheme of nature appears utterly devoid of meaning or purpose.

This bleak vision dominates contemporary mainstream academic thinking, and there can be little doubt that it has contributed powerfully to the pervasive “disenchantment” of the modern world and its multifarious ills. Over the past century or so in particular, it has also driven a deep erosion of traditional forms of religious belief. Indeed, recent years have witnessed a barrage of attacks on religion by well-meaning defenders of narrowly conceived Enlightenment-style rationalism, such as Richard Dawkins, Daniel Dennett, and Steven Pinker, who clearly regard themselves and current mainstream science as reliably marshaling the intellectual virtues of reason and objectivity against retreating forces of irrational authority and superstition. For them, the truth of physicalism has been demonstrated beyond reasonable doubt, and to think anything different is necessarily to abandon centuries of scientific progress, unleash the black flood of occultism, and revert to primitive supernaturalist beliefs characteristic of bygone times.

Not everyone shares these sentiments. I speak here on behalf of a long-running intellectual fellowship, initially organized in 1998 by Michael Murphy—cofounder of the Esalen Institute and director of its Center for Theory and Research—whose members take a starkly different view: we think it requires astonishing hubris to dismiss summarily the collective experience and wisdom of our forebears, including persons widely recognized as pillars of all human civilization, and we believe that the single most important task confronting all of modernity is that of *meaningful* reconciliation of science and spirituality.

I hasten to add that for us, any such “reconciliation” involves much more than merely segregating science and religion in their current forms into hermetically sealed “magisteria” where they can go their separate ways in uneasy coexistence, as originally decreed by Descartes and recently advocated again by Stephen Jay Gould. Rather, we believe that emerging developments within science itself are leading inexorably toward an enlarged conception of nature, one that can accommodate realities of a spiritual sort while rejecting rationally untenable “overbeliefs” of the sorts routinely targeted by critics of the world’s institutional religions. We advocate no specific religious faith, and we aspire to remain anchored in science while expanding its horizons. We are attempting in this way to find a middle path between the starkly polar-

ized fundamentalisms—religious *and* scientific—that have dominated recent public discourse. Both science and religion, we believe, must evolve.

Over the duration of the project, our work has involved more than fifty participants in all, roughly twenty of whom were actively engaged during any given year. Our core membership has remained largely constant, but as the project evolved, some members dropped out for various reasons, while others were recruited to help us address specific new issues and needs as these came into focus. Each year typically included at least one intensive five-day face-to-face meeting of currently active members in the magnificent Pacific Ocean-side ambience provided by Esalen, supplemented by occasional smaller meetings elsewhere and by extensive background interactions among particular members as needed.

Our membership has always been uncommonly diverse, including social, biological, and physical scientists, scholars of religion, philosophers, and historians of science, among others. In general terms, however, most of us are scientifically minded adults with broad interests who think of ourselves as at least somewhat “spiritual” although not “religious” in any conventional sense and who are skeptical of the currently dominant physicalist worldview but equally wary of uncritical embrace of any of the world’s major faiths with their often conflicting beliefs and decidedly mixed historical records.

We focused initially on various forms of evidence suggestive of postmortem survival. As Mike Murphy had clearly recognized, this is a watershed issue theoretically because survival beliefs are common to traditional faiths but cannot be true if the physicalist worldview is correct. Moreover, there already exists—largely unknown to believers, skeptics, and the general public alike—a sizable body of high-quality evidence suggesting that survival in personal form *does* at least sometimes occur. We quickly realized, however, that our task was really much larger and that we needed to approach it in two overlapping stages: to assemble in one place many lines of peer-reviewed evidence demonstrating empirically the inadequacy of physicalism and, far more challenging, to seek some better conceptual framework, worldview, or metaphysics to take its place.

The first stage culminated in our publication in 2007 of an eight-hundred-page book titled *Irreducible Mind: Toward a Psychology for the 21st Century* (Kelly, Kelly, Crabtree, Gauld, Grosso, and Greyson; henceforth *IM*). Topics addressed included paranormal or “psi” phenomena; manifestations of extreme psychophysiological influence, such as stigmata and hypnotically induced blisters; prodigious forms of memory and calculation; psychological automatisms and secondary centers of consciousness; near-death and out-of-body experiences, including experiences occurring under extreme physiological conditions,

such as deep general anesthesia and/or cardiac arrest; genius-level creativity; and mystical experiences, whether spontaneous, pharmacologically induced, or emerging in conjunction with transformative practices such as intense meditative disciplines of one or another sort.

Collectively, these phenomena greatly compound what contemporary philosophers of mind have increasingly recognized as the severe explanatory difficulties posed for physicalism by perfectly ordinary, everyday properties of our conscious mental life. These properties include, for example, our ability to grasp word and sentence meanings, including metaphorical meanings; the “intentionality” or “aboutness” of language and thought; the presentation of conscious experience in the form of unified wholes observed from a subjective point of view; and, perhaps most crucially, the qualitative “feels” of consciousness—the “what it’s like” to be in a particular conscious state. In a nutshell, *IM* added a rich *empirical* dimension to what appears to be a rising worldwide chorus of *theoretical* dissatisfaction with physicalism as a philosophical doctrine. We seem to be at or very near a major inflection point in modern intellectual history.

Physicalism is definitely untenable, we believe, but what should take its place? We addressed this far more difficult question, the main target of the second phase of our project, essentially by attempting to imagine how we individual human beings and the world at large must *really* be constituted in order that “rogue phenomena” of the sorts cataloged in *IM*—and for the most part systematically ignored or derided by current mainstream science—can occur.

On the psychological side, we were already committed to what historically have been described as “transmission” or “permission” or “filter” models of the mind–brain relation. As developed by great pioneers of psychical research, such as F. W. H. Myers, William James, and Henri Bergson, such models portray the brain not as the *generator* of mind and consciousness, but rather as an organ of adaptation to the demands of everyday life, in large part a sensorimotor interface that under normal conditions selects, focuses, channels, and constrains the operations of a mind and consciousness, inherently far greater in capacities and scope than the everyday conscious mind itself. A central aim of the first phase of our project had been to review and reassess the Myers–James picture of human personality in light of subsequent research, and we had found that the evidence supporting it has actually grown far stronger in the century following their deaths. Myers and James themselves, unfortunately, were soon pushed aside by the rise of radical behaviorism with its self-conscious aping of the methods of classical physics, and that influence persists in modified form even now in mainstream cognitive neuroscience (see *IM*, Chapter 1). In our view, psychology has taken an extremely lengthy, albeit probably necessary, detour and is only now becoming

capable of building on the deeper theoretical foundation that our predecessors had already created so long ago.

The normally hidden subliminal region of the mind, “The More” of William James, is the wellspring of the latent human potentials that historically have constituted Esalen’s main practical focus. But it is especially the *transpersonal* aspects of The More, with their deep psychological and historical interconnections—genius in its highest expressions, powerful and transformative mystical experiences occurring under an astonishing variety of circumstances, and the various forms of paranormal or psi phenomena, including postmortem survival—that jointly demonstrate that physicalism must give way to some richer form of metaphysics.

I must also explain more clearly here why for me personally the first phase of our project went a long way toward dissolving what the eminent American psychologist Gardner Murphy long ago called the “immovable object” in the survival debate—the biological objection to survival. To repeat: *if* the prevailing physicalist “production” model of mind–brain relations is correct, so that mind and consciousness really *are* manufactured entirely by neurophysiological processes occurring in brains, then it follows logically and inescapably that survival is impossible, period.

Brain and mind normally seem strongly correlated, of course, and that universally accepted fact has generally been taken as unambiguously supporting the production model. It is indisputable that your consciousness can be radically altered if you get hit sufficiently hard on the head, ingest a psychoactive substance, or develop an invasive brain tumor, and this fact shows unambiguously that physical changes can causally impact your mental life. But what about causation in the opposite direction? Suppose, for example, that you develop an urge to raise your hand and your hand rises into the air— isn’t that an example of something mental causing a physical effect? No, says the physicalist, you’ve simply misunderstood what’s actually going on. That intention or idea of yours, you see, was really just a pattern of neuroelectric activity in your brain. That *physical* process is what caused your hand to move—no problem!

The most direct way of countering this sort of argument is to identify psychophysical phenomena that resist or defy explanation in terms of operations of the unaided brain. That’s precisely what we set out to do in *IM*, and the evidence we assembled there demonstrates clearly, I believe, that the correlations between mind and brain are in fact much looser than generally supposed and can be conceptualized in the alternative fashion of permission or filter models without doing violence to other parts of our scientific understanding, including in particular leading-edge neuroscience and physics (see especially *IM*, Chapter 9). This clearly dismantles the supposed *logical* barrier to the

possibility of postmortem survival and in turn invites—in fact *demand*s, we believe—a more radical overhaul of the prevailing production model of the brain–mind relation and its associated physicalist metaphysics. What is at issue here, I hasten to emphasize, is *not* whether we will have metaphysics—because we inevitably will, whether conscious of it or not—but whether we will have good metaphysics or bad.

As we began to approach these larger issues, we recognized that a central element of our strategy should be to pay special attention to worldviews both past and present that explicitly attempt to accommodate at least some “rogue phenomena” of the relevant sorts. To that end, philosopher Mike Grosso began systematically surveying the long and illustrious intellectual history of filter-type conceptions, focusing mainly on Western thinkers from pre-Socratic and Platonic philosophers up through Myers, James, and Bergson around the beginning of the twentieth century and then on to more contemporary figures, such as C. D. Broad, Cyril Burt, and Aldous Huxley. We also recruited a number of new members having especially relevant skills and interests, including, for example, a number of scholars of religion who specialize in relevant forms of mystically informed religious philosophy. My coeditor here, Paul Marshall, author of several excellent books on mysticism, helped us understand more fully why and how mystical experiences—mostly ignored but otherwise generally pathologized in our Western scientific tradition—provide crucially important pieces of the metaphysical puzzle. Other contributors included Greg Shaw (a specialist in the Neoplatonic tradition), Ian Whicher (Patañjali and the yogic tradition), Loriliai Biernacki (the eleventh-century Kashmiri Tantric philosopher and sage Abhinavagupta), Jeff Kripal (comparative religion generally), and Bill Barnard (another comparativist and author of excellent books on James and Bergson). We approached this comparative material, of course, *not* with the expectation that any of these ancient systems contain all the right answers, ready-made, but rather in the interest of prospecting for common themes and useful clues as to how best to advance our theoretical purposes.

We also devoted considerable effort to relevant parts of the Western metaphysical tradition. Paul Marshall, for example, continued developing his own “monadic” theory, modified from Leibniz’s original monadology so as to enhance its power to help make sense of our rogue phenomena. Adam Crabtree investigated the contributions of William James’s friend and colleague Charles Sanders Peirce, who took both psi and survival seriously and believed his metaphysics could explain them, and Eric Weiss further elaborated his “transphysical process metaphysics,” which combines an updated version of Alfred North Whitehead’s process philosophy with insights derived from the modern Tantric philosopher and sage Sri Aurobindo.

In keeping with our general orientation, we also emphasized potential contributions from the scientific side. Neuroscientist David Presti and I, for example, examined permission or filter models from a psychobiological point of view, concentrating on psi phenomena, flights of genius, and mystical experiences as key expressions of the deeper resources of the psyche and trying to understand what sorts of brain conditions might permit or actively encourage access to these resources and why. One of the most exciting practical implications of our project, going forward, is precisely that conventional tools of mind–brain research, skillfully applied, should enable us not only to identify brain conditions conducive to the expression of these normally latent capacities but also to develop improved technological means for instantiating or stabilizing them. What we are doing, that is, also has an important *applications* dimension, potentially contributing to more effective harnessing of these valuable human potentials for personal and public good.

We also recruited several prominent physicists to our team. These included quantum theorist Henry Stapp, who presented his physics-based model of mind–brain interaction and began exploring its possible extensions to rogue phenomena, including psi and survival; Harald Atmanspacher, another quantum theorist, who informed us about the dual-aspect monism of Wolfgang Pauli and Carl Gustav Jung and showed how it leads naturally to a theoretical taxonomy of exceptional experiences matching those actually occurring in clinical practice; and Bernard Carr, a cosmologist and former president of the Society for Psychical Research, who provided expositions of his own and other forms of “hyperdimensional” theory, again emphasizing their compatibility with leading-edge science (in this case with general relativity and string theory) and their potential to help make sense of phenomena such as psi and survival.

These efforts culminated in a second large volume, *Beyond Physicalism: Toward Reconciliation of Science and Spirituality* (Kelly, Crabtree, and Marshall; henceforth *BP*), published in 2015. To cut straight to its bottom line, the overall sense we developed during this second phase of our work is that theorizing anchored to an adequately comprehensive empirical foundation—that is, one that includes challenging phenomena such as psi and survival, genius, and mystical experience—inevitably moves into metaphysical territory shared in part with the world’s traditional religious faiths. Specifically, we argued that emerging developments in science and comparative religion, viewed in relation to centuries of philosophy and philosophical theology, point toward some form of “evolutionary panentheism” as our current best guess about the metaphysically ultimate nature of things (for details, see *BP*, pp. 530–539).

In brief, pantheisms in general attempt to split the difference between classical theisms and pantheisms, conceiving of an ultimate consciousness or

God as pervading or even constituting the manifest world, as in pantheism, but with something held in reserve, as in theism. The version we tentatively embraced in *BP* further conceives the universal consciousness as in some sense slowly waking up to itself as evolution of more complex biological forms enables fuller expression of its inherent capacities. Most important from a practical point of view, it holds that we humans are intimately linked with that ultimate reality in the depths of our individual psyches, can experience it directly in a variety of ways, and can potentially aid the global evolutionary process through our own conscious efforts. As F. W. H. Myers himself more poetically expressed it at the very end of his masterwork, *Human Personality and Its Survival of Bodily Death* (1903), “That which lies at the root of each of us lies at the root of the Cosmos too. Our struggle is the struggle of the Universe itself; and the very Godhead finds fulfillment through our upward-striving souls” (Vol. 2, p. 277).

We portrayed evolutionary panentheism in *BP* as an emerging metaphysical vision—a “stealth worldview,” in Mike Murphy’s apt phrase—that potentially integrates the long philosophical tradition of dual-aspect and idealist monisms with shared lessons from the world’s mystical traditions *and* with the incipient expansion of science itself as previewed in *IM*—in effect, an expanded science-based worldview that can embrace empirical realities of spiritual sorts while remaining faithful to science. This synoptic vision seems to us to harbor tremendous practical implications—its “cash value,” as William James would say—in terms of providing humanity individually and collectively with an ethos that is fundamentally life affirming and optimistic, profoundly ecumenical in character, and potentially capable of addressing the multitude of societal ills and threats to our planet that can be seen as flowing directly or indirectly from the currently dominant physicalism. What is ultimately at stake here seems nothing less than recovery, in an intellectually responsible manner, of parts of our human cultural heritage that were prematurely discarded in conjunction with the meteoric rise of modern science. And what seems especially significant at this critical juncture, and the fundamental new factor that we think will finally allow this recovery to succeed after a number of historical failures, is that it is now being driven not only by traditional philosophic and religious concerns—amplified, perhaps, by our increasing horror at what unrestrained commerce and technology are doing to our planet—but also by leading-edge developments *in science itself*.

The consensus we developed to first approximation in *BP* clearly invited further elaboration of the identified worldviews and examination of additional systems of related types as well as empirical explorations involving many kinds of research—especially, in my view, laboratory research on meditation and psychedelics as gateways into mystical-type states of consciousness. A

great deal obviously remained to be done to narrow the identified general class of worldviews to its most viable member(s), but we gradually became confident that we were headed in the right overall direction.

Before proceeding further, I wish to insert here a brief account of my own movement toward idealism because I think it may help others make the same difficult journey. I am an experimental psychologist and neuroscientist by training, not a professional philosopher. I was certainly a physicalist most of the way through graduate school, like virtually all of my fellow students, although most (if not all) of us were at best only dimly conscious of that fact. The physicalist worldview was just part of the intellectual environment, so to speak, like water to a fish—something one absorbed passively as if by osmosis. I was subsequently jolted out of these dogmatic slumbers, however, by a prolonged firsthand encounter with what I could not fail to recognize as compelling experimental evidence for the reality of psi abilities that I knew were unexplainable in conventional physical terms.

Finding myself driven by evidence to abandon physicalism, I gravitated initially toward interactive dualism as the most natural and comfortable philosophic alternative. I should also confess that even now, when I am functioning as a working psychologist, I lapse readily into that way of thinking, with its residual (if only partial) allegiance to the physicalist conception of nature. I eventually became convinced, however, that once one abandons physicalist monism, there is no stable stopping point short of its virtual opposite—that is, some realist form of idealist monism. This was by no means an easy journey, because, like most other scientifically trained modern persons steeped in the physicalist worldview, I initially found idealism extremely difficult to take seriously.

One common physicalist objection in particular held me back until I finally recognized that it is actually without force. That objection goes roughly like this: okay, it's true that we physicalists are having a difficult time explaining how the brain creates consciousness and all that, but idealists have a problem that is exactly the opposite and equally intractable—specifically, *how does consciousness create matter?*

The correct response here is to recognize that there is a subtle but crucial asymmetry between these theoretical challenges. Let me explain: All we really have to go on, ultimately, is our experience itself—everything else is inference. We normally experience what seems to be a mostly stable, predictable, and shared external world that is independent of us and governed by certain empirical regularities, and over the past four centuries or so we have developed ways of explaining much of that experience in physicalist terms. But what the idealist *really* needs to explain is just those regularities of experience themselves—not “matter” and other components of the physicalist

conceptual framework with which we have heretofore tried to explain them. As you will see later, this is precisely what some of our idealist theoreticians are now trying to do. The outstanding question that remains to be answered, in my view, is whether a full-fledged idealist monism will ultimately succeed or whether a dual-aspect monism that attempts to extend or supplement the conventional physicalist picture in some less radical fashion will serve us better in the end.

The present volume carries forward the central themes of both previous books. Part I explores frontiers on the empirical side, concentrating on some phenomena that we view as especially challenging for theoreticians, and consists of three chapters. The first, "Near-Death Experiences," by Bruce Greyson, presents an overview of decades of near-death experience (NDE) research, using some impressive recent cases as illustrations. He also discusses evidence for and against prominent physicalist attempts to explain NDEs—including the so-called death surge or brain flash, REM intrusion, and neurochemical and neuroanatomical models—and highlights the remarkable transformative power of NDEs as evidenced by subsequent spiritual growth and development of psi abilities. The emphasis throughout is on key findings from NDE research suggesting that mind can function independently of the brain and thus possibly continue in some form after death.

Next comes "Cases of the Reincarnation Type," by Jim Tucker. Over the past fifty years—beginning with Ian Stevenson, who founded the research group at the University of Virginia, to which Bruce Greyson, Jim Tucker, and I belong—researchers have investigated children's reports of memories of previous lives, cumulatively studying more than twenty-five hundred such cases from around the world. In many of these, the children's statements have proved impressively detailed and accurate for an individual who lived and died in the recent past, someone about whom the family knew nothing before the child began reporting the memories. The children are often very young when they begin describing a past life, and they often show unusual affect or behaviors that appear appropriately related to that life, such as an intense fear of water when the previous personality had died by drowning. Some also display extremely unusual birthmarks or birth defects corresponding to fatal wounds suffered by the previous personality. The chapter also includes descriptions of two recent and strong American cases and some representative findings from the cumulative database.

"Precognition," by Bob Rosenberg, surveys case-study and experimental evidence for precognition and discusses the two great philosophical issues—causality and free will—that lurk behind it. The causal conundrum arises from our conventional view that the future does not yet exist and therefore cannot be the cause of any present perception or intuition, while the problem

about free will arises from the notion of a determinate and hence precognizable future that seems to preclude it. Both concerns are inextricably intertwined with each other and with our understanding of *time*, a key frontier of contemporary physics.

Part II explores further horizons on the theoretical side, introducing five additional nonphysicalist conceptual frameworks or metaphysical perspectives that are closely related conceptually to those previously presented in *BP*. First is “Mystical Experience and the Scope of C. G. Jung’s Holism,” by Roderick Main. The thoroughgoing holism of Jung’s thought, especially with its concepts of synchronicity, the self, and the *unus mundus*, enabled him to accommodate almost the whole gamut of exceptional experiences and states of consciousness. He long appeared to remain skeptical, however, regarding one particular state: the claimed egoless awareness of introvertive mysticism. This chapter reexamines Jung’s position on this crucial issue in light of his own late mystical experiences and some late developments in his thinking about the relationship between the ego and the self, and it strengthens the case for his being recognized as an implicit panentheist with views approaching those expressed in *BP*.

Next comes Max Velmans’s “Is the Universe Conscious?” Reflexive monism—a contemporary science-driven version of dual-aspect monism with affinities to the Indian philosophical tradition—provides a model of the self-observing universe in which consciousness “real-izes” the lived world, in the sense of making it subjectively real. The model also provides a nonreductive, integrated way of understanding how the first-person phenomenology of ordinary conscious experience relates to the conventional third-person understanding of mind within current psychology and neuroscience. The chapter reviews the main features of reflexive monism and goes on to consider ways in which it can be extended to accommodate extraordinary experiences as well as ordinary ones, thereby deepening the convergence with Indian philosophical thought.

“A Neo-Hegelian Theory of Mystical Experience and Other Extraordinary Phenomena,” by Glenn Magee, argues that a modified version of Hegel’s metaphysics can provide us with an illuminating, comprehensive, and intellectually satisfying account of the nature of mystical experience. This account of mystical experience also sheds light on paranormal phenomena, which Hegel himself accepted as real. Given Hegel’s metaphysics, we should actually find paranormal phenomena to be expected and non-mysterious—a position that in fact was Hegel’s own.

“Analytic Idealism and Psi,” by Bernardo Kastrup, presents the ontology of analytic idealism, according to which spatially unbound, universal phenomenal consciousness is nature’s sole fundamental ground, all natural

phenomena being ultimately reducible to that universal consciousness. He argues explicitly that analytic idealism is superior to physicalism on the basis of internal logical consistency, parsimony, and empirical adequacy, and he points to a broad pattern of empirical observations in psychiatry and neuroscience that is suggestive of idealism and consistent with psychological permission or filter models. Specifically, impairment of ordinary brain function is observed—contrary to what physicalism predicts—to correlate with an expanded sense of self-identity and/or experiential richness. He also sketches how some of the rogue phenomena can be understood as natural occurrences having a coherent basis within his idealist ontology.

The final theory chapter, “Consciousness Comes First,” by Federico Faggin, draws on the author’s long and distinguished career as a physicist and microelectronics pioneer, in combination with profound mystical experiences that have occurred to him over the past several decades, to sketch another new conceptual framework in which consciousness is ontologically fundamental—a framework that is consistent both with the principles of quantum physics and with insights gained in our most transformative spiritual experiences. He then uses this framework to explicate fundamental differences between natural and artificial intelligence and sketches how it can potentially accommodate some of the most challenging empirical phenomena cataloged in *IM*, *BP*, and Part I of the present volume.

Part III provides concluding reflections on these emerging post-physicalist worldviews and their potential implications for science, the humanities, philosophy, and human life more generally.

In “Expanding a Science of Consciousness,” by neuroscientist David Presti, the ongoing development of a science of consciousness is situated within the history of biophysical science as it has unfolded over the past several centuries. An abundance of empirical data has made clear that in order for the science of consciousness to flourish, it will be necessary to expand the metaphysical stage on which that science is conducted. There is nothing “unscientific” or even particularly difficult involved in doing that, and no scientific findings to date are threatened. It does, however, represent a true paradigm shift in the ongoing development of science—a shift that necessarily has profound implications for how we humans view ourselves and our place in the cosmos.

“The Future of the Human(ities),” by scholar of religions Jeff Kripal, expresses with passion and erudition his sense of the need for the humanities in general and religious studies in particular to resist and, if possible, reverse their increasingly destructive colonization by the aggressive and outmoded physicalism that has come to dominate contemporary academia and civilization generally. Only by finding and taking to heart an expanded vision of the

sort developed through this series of books, he believes, will his own discipline and the humanities in general recover their former academic standing and regain their full potential to exert positive influence on the shaping of future human affairs.

“Mind Beyond Brain,” by Paul Marshall, provides a comprehensive map of the conceptual territory occupied by mind–body metaphysical systems, situates the contributions of our theoreticians within that territory, and critically reviews philosophical approaches that seem potentially able to answer our central question: What kind of world do we live in if the various kinds of phenomena surveyed in *IM*, *BP*, and Part I of the present volume are what they seem to be? The chapter elegantly and compactly summarizes the current overall state of mind–body metaphysics and amounts in effect to the culmination of our collective theoretical efforts to date.

The volume ends with a brief epilogue in which I attempt to articulate concisely and clearly what I personally believe our decades-long project has accomplished and what I envisage as its potential ramifications for the crisis in contemporary civilization.

I

FURTHER EMPIRICAL HORIZONS

NEAR-DEATH EXPERIENCES

Bruce Greyson

Near-death experiences (NDEs) are vivid, realistic, and profoundly life-changing experiences occurring to people who have been physiologically close to death, as in cardiac arrest, or psychologically close to death, as in accidents in which they feared they would die (Greyson, Kelly, & Kelly, 2009; Kelly, Greyson, & Kelly, 2007). Once thought to be rare, several prospective studies from different countries have found NDEs to be reported by 10 to 20 percent of people who have come close to death (Greyson, 1998, 2003; Klemenc-Ketis, Kersnik, & Grmec, 2010; Parnia, Waller, Yeates, & Fenwick, 2001; van Lommel, van Wees, Meyers, & Elfferich, 2001).

Reports of such events can be found in the folklore and writings of European, Middle Eastern, African, Indian, East Asian, Pacific, and Native American cultures. The phenomenon was first described as a discrete syndrome when Swiss geologist Albert von St. Gallen Heim (1892) published a collection (translated into English by Noyes & Kletti, 1972) of the subjective observations of mountain climbers who had fallen in the Alps (as he himself had done), soldiers wounded in war, workers who had fallen from scaffolds, and individuals who had nearly died in accidents and near drownings. Shortly thereafter, French psychologist Victor Egger (1896) labeled such events *expériences de mort imminente*. Raymond Moody, who introduced the corresponding term “near-death experience” into the English language, defined these experiences as “profound spiritual events that happen, uninvited, to some individuals at the point of death” (Moody & Perry, 1991, p. 11).

NDEs have been reported by individuals who had been pronounced clinically dead but then revived, by those who actually died but were able to describe their experiences in their final moments (“deathbed visions”), and by those who, in the course of accidents or illnesses, feared that they were near

death. Although initial studies suggested that how one came close to death or how close one actually came to death does not influence the occurrence or type of NDE (Ring, 1980a, 1984), more recent research has indicated that physiological details of the close brush with death may play a minor role.

It appears, for example, that NDEs dominated by cognitive features, such as temporal distortions, accelerated thoughts, and a life review, are more common in near-death events that are sudden and unexpected than in those that may have been anticipated (Greyson, 1985). NDEs associated with cardiac arrest resemble out-of-body experiences, whereas those without cardiac arrest are more similar to depersonalization, in which one feels oneself or one's body to be unreal. NDEs occurring to intoxicated persons tend to be bizarre and confused, like hallucinations (Twemlow, Gabbard, & Coyne, 1982). Furthermore, although all elements of the NDE can be reported by individuals who merely perceive themselves to be near death, the incidence of NDEs is higher in persons who have come closer to death (Greyson, 2003; Klemenc-Ketis, Grmec, & Kersnik, 2011), and certain features, such as an encounter with a brilliant light, enhanced cognitive function, and positive emotions, are more common among individuals whose closeness to death can be corroborated by medical records (Owens, Cook, & Stevenson, 1990).

PHENOMENOLOGY OF NDEs

In introducing the term "near-death experience" into the English literature, Moody (1975) identified fifteen elements that seemed to recur in NDE reports: ineffability, hearing oneself pronounced dead, feelings of peace, hearing unusual noises, seeing a dark tunnel, being out of the body, meeting spiritual beings, encountering a bright light or "being of light," panoramic life review, a realm where all knowledge exists, cities of light, a realm of bewildered spirits, supernatural rescue, border or limit, and coming back into the body. He later added four recurrent aftereffects: frustration on relating the experience to others, broadened or deepened appreciation of life, elimination of fear of death, and corroboration of out-of-body visions (Moody, 1977). Moody noted that no two NDE accounts were precisely the same, that no experience in his collection included more than twelve of these original fifteen elements, that no one element appeared in every narrative, and that the order in which elements appeared varied from one experience to another (Moody, 1975). He warned that his list was intended as a rough theoretical model rather than a fixed definition (Moody, 1977).

Several investigators have attempted to classify the common features of NDEs into discrete phenomenological categories. The earliest classifications

of NDE regarded the experiences as unfolding in a consistent temporal pattern. Noyes (1972) described three developmental stages of NDEs: (1) resistance, terminated by surrender and tranquility; (2) review, including out-of-body and panoramic memory experiences; and (3) transcendence, involving a nontemporal dimension of existence. Ring (1980a) classified the unfolding stages of the NDE into (1) peace and well-being, (2) separation from the physical body, (3) entering a transitional region of darkness, (4) seeing a brilliant light, and (5) entering, through the light, into another realm of existence.

Subsequent research, however, has not substantiated a consistent temporal pattern for NDEs (Blanke & Dieguez, 2009; Stevenson & Cook, 1995). In a formal study seeking a fixed chronology of NDE features, Martial et al. (2017) analyzed 154 self-reported written NDE narratives but found no invariable temporal sequence and concluded that NDE features do not appear in any fixed order.

Other researchers have categorized NDE features based on phenomenology rather than temporality. Noyes and Slymen (1979) classified features reported by near-death experiencers into (1) mystical elements, such as a feeling of great understanding, vivid images, and revival of memories; (2) depersonalization elements, such as loss of emotion, separation from the body, and feeling strange or unreal; and (3) hyperalertness elements, such as vivid and rapid thoughts and sharper vision and hearing.

Greyson (1985) classified NDE elements into four components. The first component, cognitive features reflecting changes in thought processes, includes distortions in the sense of time, acceleration of thought processes, a life review or panoramic memory, and a sense of revelation or sudden understanding. The second component, affective features reflecting changes in emotional state, includes a sense of peace and well-being, feelings of joy, a sense of cosmic unity, and an encounter with a brilliant light that seems to radiate unconditional love. The third component, paranormal features reflecting apparent psychic phenomena, includes extraordinarily vivid physical sensations, apparent extrasensory perception, precognitive visions, and a sense of being out of the physical body. The final component, transcendental features reflecting apparent otherworldly phenomena, includes apparent travel to a mystical or unearthly realm or dimension, an encounter with a mystical being or presence, visible spirits of deceased or religious figures, and a border beyond which one cannot return to earthly life.

On the basis of this categorization, Greyson (1983a) developed the NDE Scale, a sixteen-item, multiple-choice questionnaire to quantify the phenomenology of NDEs. The scale has been shown to differentiate NDEs from other close brushes with death (Greyson, 1990) and to have high internal consistency, split-half reliability, and test-retest reliability over both short-term and

long-term periods (Greyson, 2007). A Rasch rating-scale analysis established that the NDE Scale represents a unidimensional measure, invariant across sex, age, intensity of experience, or time elapsed since the experience (Lange, Greyson, & Houran, 2004). Although the NDE Scale was developed as an ordinal scale without quantified anchor points, the fact that it satisfactorily fits the Rasch model suggests that, for all practical purposes, there do appear to be equal distances between measurement points, which gives the scale interval-level measurement properties (Wright & Masters, 1982). The NDE Scale has been translated into more than twenty languages and used in hundreds of studies around the world. It has served to standardize the study of NDEs, permitting comparisons of research across different investigators.

A major methodological advance in recent years has been the accumulation of large databases, such as those curated by the University of Virginia's Division of Perceptual Studies, the NDE Research Foundation, and the International Association for Near-Death Studies. These cumulative databases, incorporating thousands of NDEs, provide the opportunity for sophisticated statistical modeling and analysis of overarching patterns in precipitating factors, phenomenology, physiological and psychological correlates, and aftereffects that are not discernible from the study of individual cases.

Correlates of NDEs

Retrospective studies of near-death experiencers have shown them collectively to be psychologically healthy individuals who do not differ from comparison groups in age, gender, race, religion, religiosity, or mental health (Gabbard & Twemlow, 1984; Greyson, 1991; Holden, Long, & MacLurg, 2009; Irwin, 1985; Ring, 1980a; Sabom, 1982). Locke and Shontz (1983) found near-death experiencers to be indistinguishable from nonexperiencers in intelligence, neuroticism, extraversion, trait and state anxiety, and Rorschach indicators of openness to unusual experience. However, some studies have suggested that experiencers tend to be good hypnotic subjects, remember their dreams more often, and are adept at using mental imagery (Council & Greyson, 1985; Irwin, 1985). They also tend to acknowledge significantly more childhood trauma and resultant dissociative tendencies than their nonexperiencer counterparts (Ring, 1992). It is unclear, however, whether these personal traits and recall of prior experiences are aftereffects of NDEs or whether they are antecedent factors that facilitate NDEs when people approach death.

Expectations likely influence an experiencer's interpretation of certain features of the NDE, but they do not appear to influence the experience itself. Cross-cultural studies show few differences in NDE content from differing

societies (Holck, 1978–1979; Kellehear, 2009; McClenon, 1994), and NDE descriptions are not affected by the experiencer's prior knowledge of NDEs or expectations of the dying process or of an afterlife (Athappilly, Greyson, & Stevenson, 2006; Greyson, 1991; Greyson & Stevenson, 1980). Comparisons of NDE accounts from different cultures suggest that prior beliefs have some influence on the way people describe their experiences. However, variability in reported features may reflect not so much the experience itself as experiencers' ability to process and express an event that is largely ineffable and must be "inevitably cast in the images, concepts and symbols available to the individual" (Roberts & Owen, 1988, p. 611).

Similarity of NDEs and Mystical Experiences

Four years before Moody popularized the term "near-death experience," Noyes (1971, 1972) noted that altered states of consciousness in people as they approached death often have mystical, transcendental, cosmic, or religious features. He included in those features ineffability, transcendence of time and space, sense of truth, loss of control, intensified emotion, and vivid visual imagery.

Many of the experiential features of mystical experiences in general are similar to those of NDEs. The feelings of peace and joy, the ineffability of the experience, the sense of being in the presence of something greater than oneself, and the experience of a bright light or "being of light" are all features common to both NDEs and mystical experiences. Cressy (1994) compared typical NDE phenomenology and aftereffects to the ongoing experiences of Catholic mystics St. Teresa of Ávila and St. John of the Cross and concluded that they shared ecstatic out-of-body travel, visions of God, clairvoyance, loss of fear of death, and healing transformations. She noted that nearness to death has always played a role in the spiritual path and that for St. Teresa and St. John, mysticism was viewed as a preparation for death. She pointed out, however, that unlike mystics, those who have NDEs are thrust suddenly into spiritual consciousness without any preparation and then return to a community in which such experiences are not valued.

Just as with NDEs, the onset of a mystical experience is often signaled by overwhelming feelings of joy, happiness, and peace (James, 1902). People sometimes describe a feeling of sudden release in a mystical experience, and although they may sometimes use the term "release" metaphorically, some reports describe literal out-of-body experiences. Many people also report enhanced mental functioning or heightened perception in mystical experiences, just as in NDEs. A sensory phenomenon that is particularly common to both NDEs and mystical experiences is the sense of seeing a bright light of unusual

quality. As with “release,” some people seem to use the phrase “seeing the light” in a figurative sense, but others are clearly referring to what was to them a real and vivid sensory phenomenon.

Pahnke and Richards (1966) delineated nine aspects of mystical experience, based on the previous work of James (1902) and Stace (1960): a sense of cosmic unity or oneness, transcendence of time and space, deeply felt positive mood, sense of sacredness, noetic quality or intuitive illumination, paradoxicality, ineffability, transiency, and persistent positive aftereffects. All nine of these features are commonly reported as part of the NDE (Penachio, 1986). This nine-factor model of mysticism was subsequently operationalized by Hood’s (1975) Mysticism Scale. An analysis of Mysticism Scale scores among people who had come close to death with and without NDEs revealed that mystical experiences were reported by two-thirds of those who described NDEs but by none of the comparison survivors who did not have NDEs (Greyson, 2014). Near-death experiencers endorsed most often the mystical experience features of noetic quality, positive affect, and unity and least often ego loss, timelessness/spacelessness, and ineffability. Scores on the NDE Scale, indicating depth of NDE, were highly correlated with scores on the Mysticism Scale. However, factor analysis of all subjective features during the brush with death yielded two distinct factors representing mystical and near-death elements. Collectively, these studies suggest that NDEs have substantial commonalities with, but can be differentiated from, mystical experience.

AFTEREFFECTS OF NDEs

NDEs often permanently and dramatically alter the experiencer’s attitudes, beliefs, and values (Noyes, Fenwick, Holden, & Christian, 2009). Aftereffects most often reported include increases in spiritual attitudes and interests, concern for others, and sense of purpose or meaning in life, as well as decreases in fear of death, materialism, and competitiveness (Bauer, 1985; Flynn, 1982, 1986; Grey, 1985; Greyson, 1983b, 1992a; McLaughlin & Maloney, 1984; Noyes, 1980; Ring, 1980a, 1984; Ring & Valarino, 1998; Sabom, 1982, 1998; van Lommel et al., 2001). Near-death experiencers tend to see themselves as integral parts of a benevolent and purposeful universe in which personal gain, particularly at others’ expense, is counterproductive.

Using an objective measure of attitude changes following NDEs, Ring and Rosing (1990) found that near-death experiencers reported strong increases in more favorable attitudes toward life, sense of meaning or purpose, spirituality, concern for others, and self-acceptance. Slightly lower

increases included positive concern for social issues and attitude toward religion, and there were decreases in favorable attitudes toward material concerns and personal power or fame.

Other studies of experiencers' attitudes before and after their experiences report a reduced fear of death, a sense of relative invulnerability, a feeling of special importance or destiny, and a strengthened belief in postmortem existence (Flynn, 1982; Noyes, 1980). NDEs led to greater appreciation for life, renewed sense of purpose, greater confidence and flexibility in coping with life's vicissitudes, increased value of love and service, greater compassion for others, heightened sense of spiritual purpose, decreased concern with personal status and material possessions, and a greatly reduced fear of death (Bauer, 1985; Ring, 1980a, 1984). In studies comparing the attitudes of near-death experiencers with those of other groups, including persons who had come close to death but had not had NDEs, experiencers place significantly lower value on social status, professional and material success, and fame (Greyson, 1983b) and find death less threatening (Greyson, 1992a). These profound changes in attitudes and behavior have been corroborated in long-term studies of near-death experiencers and in interviews with their significant others (Ring, 1984).

Although a less fearful attitude toward death has been associated with an increase in suicidal thoughts (Shneidman, 1971), near-death experiencers paradoxically express stronger objections to suicide than do comparison samples, primarily on the basis of their increased transpersonal or transcendental beliefs (Greyson, 1992b). More specifically (and seemingly paradoxically given the positive nature of most experiences and the reluctance of many experiencers to return to the body), those who experience an NDE as the result of a suicide attempt rarely try to take their own lives again, in contrast to most other suicide attempters. This effect may be the result of an increased sense of purpose and appreciation for life (Greyson, 1981, 1992b).

These transformative effects of NDEs have not been reported in connection with the various fragmentary experiences that are sometimes mistaken for NDEs, such as the "dreamlets" induced by hypoxia or other abnormalities of blood gas concentrations (Whinnery, 1997) or experiences reported by patients receiving temporal lobe stimulation (Blanke, Ortigue, Landis, & Seeck, 2002). Moreover, the transformative aftereffects associated with NDEs differ from those associated with coming close to death but not having an NDE (Fenwick & Fenwick, 1995; Greyson, 1983b; Klemenc-Ketis, 2013; Ring, 1984; Sutherland, 1992; van Lommel et al., 2001). Although many individuals who almost die report an enhanced appreciation for life, those who do not have NDEs often become more anxious and depressed, withdraw from social activities, and have posttraumatic stress symptoms (Wachelder et al., 2009).

In contrast, near-death experiencers show a greater zest for life and more intense appreciation for friendships and nature, and they live more fully in the moment (Noyes et al., 2009).

Even though NDEs are not influenced by prior religious belief or religiosity, they do seem to affect subsequent religious preference, religiosity, and spirituality. Near-death experiencers describe themselves as more spiritual than they were before, but they do not attend church more often than they did prior to their experiences, nor do they participate in other modes of formal religious worship. Instead, they described a heightened inward religious feeling that does not seem to require a conventional religious expression. They overwhelmingly tend to describe themselves as spiritual rather than religious, and when asked an open-ended question about the most significant change resulting from the NDE, the single most common response is “spirituality” or “spiritual growth” (Musgrave, 1997; Sutherland, 1990). Near-death experiencers report having a greater awareness of divine presence in their lives that makes conventional religious observances seem unnecessary. People who survive a close brush with death but do not have NDEs report no change in their religious beliefs (Ring, 1980b).

NDEs tend to foster a shift from ego-centered to other-centered consciousness, a disposition to love unconditionally, heightened empathy, and deepened spiritual consciousness (Flynn, 1982). NDEs, particularly the moral assessment in the life review, provide a firsthand experience with compassionate and empathic understanding of how one’s thoughts, feelings, and actions affect others (Lorimer, 1990).

A comparison of people who had come close to death with and without NDEs showed that survivors who had NDEs reported greater spiritual growth than did survivors without NDEs, whereas spiritual decline was comparable in the two groups (Greyson & Khanna, 2014). Additionally, survivors who had NDEs reported greater spiritual well-being than survivors who did not have NDEs (Khanna & Greyson, 2014a). Likewise, following a close brush with death, survivors who reported NDEs described more daily spiritual experiences than did those who did not report NDEs, even though the frequency of daily spiritual experiences of the two groups had been comparable prior to their close brush with death (Khanna & Greyson, 2014b). Furthermore, near-death experiencers reported greater posttraumatic growth than did survivors of a brush with death who did not have NDEs, suggesting that existential reevaluation and challenges to one’s assumptive worldview, which are typical in NDEs and other spiritual experiences, are a major stimulus to posttraumatic growth (Khanna & Greyson, 2015).

Following NDEs, some people continue to report alterations in consciousness and extraordinary experiences that could be called psychic or

paranormal. These include extrasensory perception, psychokinesis, periodic out-of-body experiences, encounters with apparitions, perception of auras, apparent communication with the deceased, apparent past-life memories, precognition, healing abilities, and recurring spiritual or mystical experiences (Noyes et al., 2009; Owens, 1995). Near-death experiencers report more such events and abilities than do comparison groups who have not had NDEs (Kohr, 1982, 1983) and more such experiences than they had had before their NDEs (Greyson, 1983c; Groth-Marnat & Summers, 1998; Ring, 1984; Sutherland, 1989). In contrast to these psychic aftereffects, near-death experiencers report having had such paranormal experiences *prior* to their NDEs *less* often than comparison groups (Greyson & Stevenson, 1980) or no more than the general population (Sutherland, 1989). Furthermore, 80 percent of near-death experiencers acknowledge hearing “inner voices” after their NDEs, which they value for their inspiration, guidance, and intuitive knowledge (Greyson & Liester, 2004).

NDEs appear to change not only attitudes but also behavior. Many people report that their lifestyle before the NDE no longer felt comfortable or fulfilling. One-third of near-death experiencers change their occupation as a result of the NDE, and three-fourths report marked changes in their activities. These wide-ranging and long-lasting effects of NDEs constitute one of the most consistent aspects of the experience. From my decades-long experience as a psychiatrist, I know how difficult it can be to make modest changes, often requiring long periods of intensive effort, and yet most near-death experiencers claim their NDEs precipitated immediate transformations of their attitudes and beliefs.

It appears that after people experience a different way of looking at reality in their NDEs, they continue to regard the perceptions and insights of the NDE as “more real” than those of the everyday physical world (Dell’Olio, 2010; Long & Perry, 2010), and they neither can nor want to return to the attitudes, values, and behavior they had before the NDE. Two-thirds of near-death experiencers report that they feel better about themselves as a result of their NDEs, and three-fourths said that they were more likely to help others than they were before their NDEs. More than half report that the effects of their NDEs continued to increase over time. Any comprehensive understanding of NDEs must address their ability to effect such radical change.

PROPOSED PHYSIOLOGICAL EXPLANATIONS FOR NDEs

Several physiological models have been proposed in attempts to explain NDEs and their consistent features in conventional terms.

Decreased Oxygen and Increased Carbon Dioxide

People report similar NDEs no matter how they come close to death, so it is plausible to seek an explanation based on events that occur in all near-death situations. Regardless of the cause of a near-death event, one of the final steps is cessation of heartbeat and respiration, cutting off the flow of oxygen to the brain. Indeed, unconsciousness induced by rapid acceleration in fighter pilots, which reduces blood flow to the head, may produce concentric contraction of the visual field, bizarre visual imagery, a sense of floating, pleasurable sensations, and (rarely) a sense of leaving the body (Whinnery, 1997).

However, decreased oxygen is a highly distressing experience, particularly for those who report perceptual distortions and hallucinations (Breitbart, Gibson, & Tremblay, 2002). The fear, agitation, and belligerence typical of decreased oxygen contrast markedly with NDEs, which are usually recalled as peaceful and positive experiences (Greyson et al., 2009; Kelly et al., 2007; Zingrone & Alvarado, 2009). Furthermore, contrary to the hypoxia hypothesis, empirical research on altered oxygen levels has shown that NDEs are associated with *increased* oxygen levels (Parnia et al., 2001; Sabom, 1982) or levels equivalent to those of non-experiencers (Morse, Conner, & Tyler, 1985; van Lommel et al., 2001). No study has yet shown decreased levels of oxygen during NDEs.

A related model posits that increased carbon dioxide (hypercapnia) is associated with NDEs in cardiac arrest survivors (Klemenc-Ketis et al., 2010). Empirical data on altered carbon dioxide levels in NDEs have been equivocal. Klemenc-Ketis et al. (2010) found marginally increased carbon dioxide levels associated with NDE. However, prior studies with larger samples reported decreased (Sabom, 1982) or normal levels of carbon dioxide (Morse et al., 1985; Parnia et al., 2001) in cardiac arrest survivors who reported NDEs.

The interpretation of these data is unclear, as higher levels of carbon dioxide are indicators of better cardiac output, which would reduce the amnesia usually seen in cardiac arrest (Kolar, Križmarić, Klemen, & Grmec, 2008). Thus, if there were any correlation between hypercapnia and NDE reports, it might reflect only that patients who recall more of their cardiac arrest experience also report more NDEs (Greyson, 2010a). Indeed, van Lommel et al. (2001) found that memory deficits were seven times more common in cardiac arrest survivors who did not report NDEs than among those who did. The interpretation of blood gas alterations is further complicated by the fact that blood gas levels of oxygen and carbon dioxide are not necessarily accurate estimates of levels in the brain (Gliksman & Kellehear, 1990).

It has been claimed that Meduna (1950), using inhaled carbon dioxide as a psychotherapeutic agent, demonstrated all the features of NDEs in his patients (Morse, Venecia, & Milstein, 1989). However, although Meduna's

treatments did yield some experiences that resembled NDEs, these were rare, and he warned that the effects of inhaled carbon dioxide were selective and unpredictable, were similar to those associated with mescaline or other hallucinogenic drugs, and were often associated with anxiety and fear of further treatments. He concluded that some of these phenomena were hallucinations or dreams and that attempting to classify them as real or imaginary would be futile. Meduna further speculated that the pleasant effects of the inhaled carbon dioxide may have been due to suggestions from the administering physician, a speculation that was supported by subsequent research in which participants who inhaled carbon dioxide mixtures reported either pleasant or unpleasant feelings, consistent with what they had been told to expect (van den Hout & Griez, 1982).

In sum, both the clinical and the research data appear to contradict a role for either decreased oxygen or increased carbon dioxide in NDEs.

Neurochemical Models

Some researchers have viewed NDEs as hallucinations produced either by medications given to dying patients or by metabolic disturbances or brain malfunctions as a person approaches death (Blackmore, 1993). However, organic brain malfunctions generally produce clouded thinking, irritability, fear, belligerence, and idiosyncratic visions (American Psychiatric Association, 2013), quite unlike the exceptionally clear thinking, peacefulness, calmness, and predictable content generally seen in NDEs (Zingrone & Alvarado, 2009). Visions in delirium are generally of living persons, whereas those in NDEs are almost invariably of deceased persons (Osis & Haraldsson, 1977). Moreover, although some drugs may on occasion induce experiences that bear superficial similarities to NDEs, comparative studies have shown that patients who receive medications in fact report *fewer* NDEs than do patients who receive no medication (Greyson, 1982; Osis & Haraldsson, 1977; Sabom, 1982). Such findings suggest that drug-induced or metabolically induced delirium in fact inhibits NDEs or at least interferes with their later recall.

NDEs have also been speculatively linked to a number of endogenous neurotransmitters in the brain, most frequently endorphins (Carr, 1982), although other models have implicated serotonin, adrenaline, vasopressin, and glutamate (Jansen, 1997a; Morse et al., 1989; Persinger, 1994; Saavedra-Aguilar & Gómez-Jeria, 1989). All of these models are speculative, and none have been tested.

Neurochemical models derive their plausibility from comparisons between NDEs and spiritual experiences associated with psychedelic drugs.

Researchers have found some overlap between reports of NDEs and reports of hallucinogenic trips, most often those associated with ketamine (Corazza & Schifano, 2010; Jansen, 1997a) and dimethyltryptamine (Strassman, 2001; Timmermann et al., 2018). A comparison using latent semantic analysis of accounts of NDEs and accounts of psychedelic experiences with 165 different psychoactive drugs found that the drug states most similar to NDEs, regardless of the circumstances of the NDEs, the actual proximity to death, and the emotional valence assigned by the experiencer, were those associated with the dissociative anesthetic ketamine (Martial et al., 2019). However, the authors noted that these similarities did not establish a neurochemical cause of NDEs (p. 65), and indeed five of the top ten runner-up substances were serotonergic psychedelics, a very different neurochemical class including LSD, psilocybin, and DMT.

Prior researchers had noted differences between NDEs and ketamine-induced phenomenology, such as the generally blissful nature of NDEs contrasted to the common occurrence of ketamine “bad trips” (Fenwick, 1997; Strassman, 1997). Further criticism of the ketamine model is based on the observation that not all individuals in proximity to death actually report an NDE (Sleutjes, Moreira-Almeida, & Greyson, 2014). Additionally, certain effects of subanesthetic doses of ketamine are not among the features that characterize NDEs, arguing against the reductionist explanation of NDEs as a consequence of NMDA receptor blockade (Adler et al., 1999; Dillon, Copeland, & Jansen, 2003; Martial et al., 2019). Even Jansen (1997b), the most ardent promoter of the ketamine model for NDEs, concluded after twelve years of research that ketamine was best viewed “as just another door” to NDE-like experiences and not as actually producing them (p. 94).

In summary, all the research done to validate or refute neurochemical models has been based on retrospective reports, and no neurochemical analyses or other physical examinations of the subjects were performed at the time of the reported NDEs. Without that kind of direct empirical evidence, we can conclude only that the reported phenomenology of certain drugs is similar to that of NDEs and that those drugs might be effective tools for the induction of experiences that mimic NDEs. It is nevertheless certain that these laboratory-induced NDEs should be considered a mere “reflection” of “authentic” NDEs (Martial et al., 2019).

Neuroanatomical Models

NDEs have also been speculatively associated with a number of anatomic locations in the brain, most often the right temporal lobe (Blanke et al., 2002; Morse et al., 1989) or the left temporal lobe (Britton & Bootzin, 2004). Other

neuroscientists have argued for involvement of the frontal lobe (primarily the prefrontal cortex), the parietal lobe, the thalamus, the hypothalamus, the amygdala, and the hippocampus (Azari et al., 2001; Carr, 1982; Fenwick, 2001; Jourdan, 1994; Newberg & d'Aquili, 1994; Saavedra-Aguilar & Gómez-Jeria, 1989; Whinnery, 1997).

Several researchers have claimed that common NDE features may be related to temporal lobe dysfunction. For example, Blanke and colleagues have reported that temporal lobe seizures or direct electrical stimulation of the temporal lobe elicit experiences similar to leaving the body (Blanke et al., 2002; Blanke, Landis, Spinelli, & Seeck, 2004). However, induced out-of-body sensations elicited by temporal lobe stimulation are accompanied by vestibular and complex somatosensory responses such as bizarre body image distortions, which do not occur in NDEs. In addition, induced out-of-body sensations do not include accurate perceptions of the environment from a spatial perspective distant from the body or of perspectives that move around to different locations, as do many NDEs, and they are not associated with the transformative aftereffects typical of NDEs (Greyson, Parnia, & Fenwick, 2008).

Likewise, Vignal, Maillard, McGonigal, and Chauvel (2007) reported that autobiographical memories evoked by temporal lobe seizures or stimulation are usually experienced as passive thoughts or visions that do not interfere with the experiencers' ongoing perception of the surrounding environment. Electrically induced memories are most often accompanied by fear, may be visual or auditory (but not both), and are usually forgotten after a couple of hours. In contrast, the life review in NDEs is typically experienced as an active reliving of past events that occludes perception of the experiencer's immediate environment, is rarely accompanied by fear, is usually multisensorial, and remains vivid for years (Noyes & Kletti, 1977; Stevenson & Cook, 1995).

Persinger (1989) claimed that major components of NDEs could be provoked experimentally by inducing electrical currents in the temporal region through exogenous spike-and-wave magnetic field sources. However, the experiences evoked by his magnetic field were fragmented and variable, unlike the more integrated and consistent narratives of NDEs. Moreover, research participants were able to converse with the experimenter and report their sensations as they occurred (Persinger, 1994), unlike near-death experiencers, who report a subjective shift to a supramundane world and are unable to communicate during the NDE. Furthermore, Granqvist et al. (2005) could not replicate Persinger's results using Persinger's own equipment; they concluded that suggestion, rather than the induced electrical current, accounted for his findings.

Some researchers have cited the pioneering work of neurosurgeon Wilder Penfield in the 1950s as evidence that abnormal electrical activity in the temporal lobe can cause out-of-body experiences (Blackmore, 1993; Morse et al., 1989; Neppe, 1989; Tong, 2003). By probing patients' brains with an electric current while they were awake and able to report their experiences, Penfield was able to map out the brain, indicating which areas controlled different parts of the body or gave rise to various sensations when they were stimulated. He is widely reported to have produced out-of-body experiences and other NDE-like phenomena by electrically stimulating the temporal lobes, but, in fact, only two out of the 1,132 patients he stimulated reported anything that was even vaguely like an out-of-body experience, such as "I have a queer sensation as if I am not here" (Penfield & Rasmussen, 1950, p. 174). These two patients reported a sense of unreality about their sense of being out of the body, in contrast to near-death experiencers' sense of their NDEs being "more real than real," and neither of those patients reported seeing themselves from above, as often happens in NDEs (Penfield, 1955; Penfield & Rasmussen, 1950).

More recent researchers have reported that stimulating the temporal lobe with an electric current can produce a feeling of the body being distorted or even a sensation of leaving the body (Blanke et al., 2002). But as with Penfield's two patients, there are many important differences between these sensations induced by electrical stimulation and the out-of-body experiences associated with NDEs (Greyson et al., 2008). Perhaps the most crucial is that patients whose brains are being stimulated describe these sensations as unrealistic dreamlike events, not as things that are really happening, whereas people describe their NDEs as undeniably real events.

Despite these reports suggesting a link between NDEs and the temporal lobes, studies of patients with seizures have found that a sense of leaving the body can be reported by patients with a variety of seizure types affecting different parts of the brain (Devinsky, Feldmann, Burrowes, & Bromfield, 1989). In fact, the vast majority of subjective experiences elicited by external stimulation of the temporal lobes bear no resemblance to NDEs (Horowitz & Adams, 1970), and the vast majority of patients with temporal lobe seizures do not report out-of-body experiences (Devinsky et al., 1989). An epileptologist who himself experienced an NDE noted bluntly, "In spite of having seen hundreds of patients with temporal lobe seizures during three decades of professional life, I have never come across that symptomatology as part of a seizure" (Rodin, 1989, p. 256).

A recent study of patients with seizure disorders found that neither mystical experiences nor out-of-body experiences were associated with any particular lobe of the brain, nor were they lateralized to either the right or the left

side (Greyson, Fountain, Derr, & Broshek, 2014, 2015). Out of the hundred patients, seven reported having had an experience that was at least vaguely like leaving the body during a seizure. All but one insisted that they knew these experiences were not real. In contrast to these patients with seizures, people who report NDEs almost always insist their experiences were real. Furthermore, most near-death experiencers describe feeling relief or a sense of freedom when they leave their bodies in NDEs. However, patients who described a sense of leaving their bodies during seizures commonly report intense horror or fear (Brugger, Agosti, Regard, Wieser, & Landis, 1994; Devinsky et al., 1989).

Beauregard and his colleagues measured brain activity in people who had previously had NDEs while they attempted to re-create their NDEs during meditation (Beauregard, Courtemanche, & Paquette, 2009). The authors found that there was no one part of the brain that was associated with NDE memories. Rather, several different parts of the brain became active when the NDEs were remembered.

All in all, there seems to be scant evidence for any one area of the brain being uniquely involved in NDEs. Despite untested speculations about various regions of the brain being involved in NDEs, the only area that has received significant attention has been the temporal lobe, and the clinical and research data suggest that neither seizures in that region nor electrical or magnetic stimulation of it reliably induce either the phenomenology or the aftereffects typical of NDEs. Penfield (1975) himself, whose meticulous mapping of the functions of the cerebral cortex is often cited as the source of these anatomic speculations, wrote in his final publication, "There is *no* area of gray matter, as far as my experience goes, in which local epileptic discharge brings to pass what could be called 'mind-action.' . . . I am forced to conclude that there is no valid evidence that either epileptic discharge or electrical stimulation can activate the mind" (pp. 77–78).

"Death Surges" or "Brain Flashes"

In the past decade, reports have claimed to find very brief but unexpected increases in human brain electrical activity at the point of death (Chawla, Akst, Junker, Jacobs, & Seneff, 2009) or even after cardiac death during organ donation (Auyong et al., 2010). However, no subjective experiences have been associated with this electrical activity, so it is not clear that it has any relevance to NDEs. Moreover, the findings of increased electrical activity were based not on standard electroencephalograms but on the bispectral index, a derivative measure vulnerable to artifact pollution from a variety of physiological and environmental sources, leading to spurious signals misinterpreted

as brain activity (Dahaba, 2005; Myles & Cairo, 2004). This statistical measure, based on electrical recordings from only two electrodes on the patient's forehead, is particularly vulnerable to false readings coming from electrical activity of the underlying forehead muscle, which even at rest can produce signals that resemble brain waves (Goncharova, McFarland, Vaughan, & Wolpaw, 2003; Yilmaz, Ungan, Sebik, Uginčius, & Türker, 2014).

It was further reported that for thirty seconds after cardiac arrest, rat brains can generate electrical activity that might be related to NDEs (Borjigin et al., 2013). However, this electrical surge was only a tiny fraction of the electrical power prior to cardiac arrest and was completely eliminated by anesthesia, which does not eliminate NDEs (Greyson, Kelly, & Dunseath, 2013).

The speculation that this "death surge" in some rats implies the presence in the human brain of enough electrical activity to produce a vivid and elaborate experience contradicts decades of clinical experience and research. Electrical activity in the human brain decreases within six to seven seconds of the heart stopping, without any surge (Clute & Levy, 1990; de Vries, Bakker, Visser, Diephuis, & van Huffelen, 1998; Losasso, Muzzi, Meyer, & Sharbrough, 1992; van Lommel, 2011). And after ten to twenty seconds, the electroencephalogram (EEG) goes flat, indicating cessation of activity in the cerebral cortex. In fact, analysis of the EEGs of people after life support is withdrawn showed that the brain's electrical activity in such cases actually stops *before* the heartbeat stops and before blood pressure ends, and after the heart stops there is no well-defined EEG activity (Norton et al., 2017). These consistent clinical findings seem to rule out the possibility that NDEs could be related to a "death surge" of electrical activity in the brain.

Rapid Eye Movement Intrusion

Some psychologists have speculated that NDEs are elaborate fantasies or dreams created to distract a person in crisis from the pain and terror of a close brush with death. Nelson, Mattingly, Lee, and Schmitt (2006) restated this idea in testable physiological terms by suggesting that the kind of brain activity associated with dreams—rapid eye movement (REM) brain activity—can intrude into our waking thoughts in a near-death crisis, producing dreamlike thoughts and images. NDEs and REM intrusion share common elements of unusual light and a sense of being immobilized, yet alert to the surroundings, and a sense of being dead. It has been suggested that other aspects of NDEs, including seeing an image of one's own body, visual experience, pleasant feelings, and transcendent qualities, can also occur in other conditions associated with REM intrusion (Nelson et al., 2006).

Nelson et al. (2006) found that near-death experiencers endorsed more symptoms of REM intrusion than did a comparison group. However, the experiencers reported these REM intrusion symptoms no more than did the general population, whereas the “comparison” group reported far *lower* frequencies. The survey on which this correlation with REM intrusion was based drew its NDE sample from people who shared their experiences on the internet, suggesting an unusual willingness to acknowledge anomalous experiences, albeit anonymously. The comparison sample, by contrast, was recruited from medical center personnel and their contacts and queried in face-to-face interviews, possibly inhibiting their endorsement of symptoms they would likely identify as pathological (Greyson & Long, 2006). For example, only 7 percent of the comparison group acknowledged hypnagogic hallucinations, one of the four criteria Nelson and colleagues used to diagnose REM intrusion; that percent was about one-fourth of the percentage found in the general population (Ohayon, Priest, Zulley, Smirne, & Paiva, 2002).

Data arguing against the contribution of REM intrusion to NDEs include features like fear, which is typical in the sleep paralysis seen in REM intrusion but rare in NDEs. Furthermore, NDEs commonly occur under general anesthesia and other drugs that inhibit REM activity (Cronin, Keifer, Davies, King, & Bixler, 2001). Moreover, measurements of REM brain activity in people who have had NDEs show that they actually have less REM activity than do other people (Britton & Bootzin, 2004). Finally, an Italian research team found that experiencers remembering their NDEs did not have brain wave patterns typical of recalling fantasies or dreams, but rather patterns typical of memories of real events (Palmieri et al., 2014).

A correlation between REM intrusion and NDEs, if it were to be corroborated by additional research, might suggest either that REM intrusion contributes to NDE phenomenology or that NDEs enhance subsequent REM intrusion. The latter interpretation is supported by the increased REM intrusion in posttraumatic stress disorder (Husain, Miller, & Carwile, 2001) and the increased posttraumatic stress symptoms following NDEs (Greyson, 2001).

Overall Evaluation of Physiological Models

Many of the physiological hypotheses proposed to explain NDEs in conventional terms do so by selectively emphasizing certain features of the experience and by ignoring more critical NDE phenomena that they cannot accommodate. Some commentators openly acknowledge discounting empirical data on those aspects of NDEs that do not fit their models. Blackmore (1993), for example, acknowledged the challenge that phenomena like

accurate out-of-body perception pose for her physiological model, conceding that if they were convincingly documented, her physiological model would be overthrown, and Watt admitted that in her article with Mobbs discounting such phenomena (Mobbs & Watt, 2011), they intentionally avoided looking for any published evidence of accurate out-of-body perception (Greyson, Holden, & van Lommel, 2012).

None of the neurophysiological mechanisms proposed to explain NDEs has been demonstrated to occur in a near-death state, and some, such as those based on cerebral anoxia, have been contradicted by empirical data. No theory has yet been proposed that can account satisfactorily for all the common elements of NDEs. Many of the neurological hypotheses that have been proposed so far are untestable in terms of currently available methodologies. Neurophysiological studies may someday bridge the gap between NDEs and physiological events, but as Blanke and Dieguez (2009) observed, “there are—at this stage—not even preliminary data on the neurology of the different phenomena associated with NDEs” (p. 320).

Ultimately, even if evidence were found to support a physiological model for the NDE, the interpretation of that evidence would be philosophically ambiguous. Correlating a brain state with an experience does not necessarily imply that the brain causes the experience; the brain state may alternatively allow access to or simply reflect the experience. As Strassman (1997) expressed it, “Understanding how the television set works does not yield any information regarding from where the images and sounds arise” (p. 38).

THEORETICALLY CHALLENGING FEATURES OF NDEs

NDE Features Suggestive of Mind–Body Independence

Some features common to NDEs are difficult to explain in terms of known physiological processes. For example, experiencers typically report that their thinking became clearer and faster and their perceptions more vivid when their brains were demonstrably impaired. Perhaps the most challenging feature is the frequent report that during the NDEs they viewed their bodies from an out-of-body spatial perspective, sometimes accompanied by accurate perception of what was going on while they were ostensibly unconscious (Hampe, 1979; Holden, 2009; Moody, 1977; Sabom, 1982; van Lommel et al., 2001).

More than 80 percent of the 728 experiencers who participated in a study of NDEs at the University of Virginia reported a sense of being outside their physical bodies, and half of those described actually seeing their bodies and observing events around them from a viewpoint above the scene. Some

of the out-of-body visions that experiencers describe are difficult to verify and might plausibly be attributed to the experiencer's imagination or lucky guesses about events that might have been expected to occur. However, others contain accurate information that could not have been expected or imagined.

For example, a fifty-six-year-old van driver started having chest pains at work one Monday morning, and his dispatcher called the rescue squad. He was taken to the hospital, where during diagnostic testing one of the main arteries to his heart became totally blocked. He was rushed to the operating room for what became quadruple bypass surgery and later described an out-of-body experience as follows:

When I came to, I was looking down on the operating room from above. As I looked down, to my amazement, at the lower left-hand side was, of all things, me! I was lying on a table covered with light blue sheets and I was cut open so as to expose my chest cavity. In this cavity I was able to see my heart. I was able to see my surgeon, who just moments ago had explained to me what he was going to do during my operation. He appeared to be somewhat perplexed. I thought he was flapping his arms as if he was trying to fly. (Greyson, 2021, p. 65)

After the patient regained consciousness and the tube was removed from his throat, he told his cardiologist what he had observed during the operation, including seeing the surgeon flapping his elbows as if he were trying to fly. He demonstrated by placing his palms on his chest and wiggling his elbows. The cardiologist's eyes widened, and he asked who had told him about that. When the patient insisted that he had seen it himself while hovering above the operation, the cardiologist acknowledged that this was a peculiar habit of the surgeon. After he had "scrubbed in" to the operating room and donned sterile gloves, the surgeon did not want to touch anything in the room that might transfer a contaminant, however small, to his hands. For that reason, while he watched his assistants begin the operation, he planted his hands on his chest, flat against his sterile gown, to make sure he didn't accidentally touch anything. He then supervised his team, using his elbows instead of his fingers to point out various things. On a later follow-up visit with the surgeon himself, the patient asked him about this peculiar habit, and the surgeon replied, "Well, you're here, you're alive, so I must do something right!"

His surgeon independently confirmed that that peculiar elbow-flapping behavior was indeed a regular habit of his, and the cardiologist verified that he had never seen any other surgeon do this. A review of the medical records revealed that the patient had first been given a local anesthetic so that a balloon could be inserted into his aorta and was then given a general anesthetic for the surgery itself. That raised the possibility that the patient might have seen his surgeon flapping his arms before he was given the general anesthetic.

However, he reported that he saw the surgeon flapping his arms while standing alone over his chest, which was being held open by metal clamps, directing two other surgeons who were working on his leg. He was puzzled as to why they were working on his leg but later learned they needed to strip a vein out of his leg to create the bypass graft for his heart. That detail clearly established that the patient had been anesthetized and unconscious when he had witnessed the surgeon flapping his arms.

It is difficult to attribute this patient's accurate perceptions to his imagination or expectation or to a "lucky guess." Many similar NDE accounts have been published in which experiencers report that, while out of the body, they became aware of events occurring at a distance or otherwise beyond the reach of their ordinary senses even if they had been fully and normally conscious. Clark (1984) and Owens (1995) each published a case of this type, and we have reported on fifteen cases, including seven cases previously published by others and eight from our own collection (Cook, Greyson, & Stevenson, 1998; Kelly, Greyson, & Stevenson, 2000), including accurate perceptions of highly unexpected or unlikely details. Additionally, Ring and Cooper (1997, 1999) reported thirty-one cases of blind individuals, nearly half of them blind from birth, some of whom experienced during their NDEs quasi-visual veridical perceptions of objects and events.

One common criticism of these out-of-body perception accounts is that they often depend on the experiencer's testimony alone, but many cases have in fact been corroborated by independent witnesses (Clark, 1984; Cook et al., 1998; Hart, 1954; Ring & Lawrence, 1993; van Lommel et al., 2001). In a review of ninety-three published reports of potentially verifiable out-of-body perceptions during NDEs, Holden (2009) found that 86 percent had been corroborated by an independent informant and that only 14 percent relied solely on the experiencer's report. Of these out-of-body perceptions, 92 percent were completely accurate, 6 percent contained some error, and only one was completely erroneous. Among those cases corroborated to the investigator by an independent informant, 88 percent were completely accurate, 10 percent contained some error, and 3 percent were completely erroneous. The cumulative weight of these cases is inconsistent with the conception that purported out-of-body perceptions are nothing more than hallucinations.

Sabom (1982) carried out a study specifically to examine whether claims of out-of-body perceptions could be attributed to retrospective reconstruction. He interviewed patients who reported NDEs in which they seemed to be watching what was going on around their body, most of them cardiac patients who were undergoing cardiopulmonary resuscitation at the time of their NDE. He also interviewed seasoned cardiac patients who had not had an NDE during their cardiac-related crises and asked them to describe a

cardiac resuscitation procedure as if they were watching from a third-person perspective. He found that 80 percent of the comparison patients made at least one major error in their descriptions, whereas none of the NDE patients made any. Sartori (2008) replicated Sabom's findings in a five-year study of hospitalized intensive care patients in which patients who reported leaving their bodies during cardiac arrests described their resuscitations accurately, whereas every cardiac arrest survivor who had not reported leaving the body gave inaccurate accounts of equipment and procedures when asked to describe their resuscitation.

Some people additionally report that, while ostensibly out of the body, they saw events they could not have perceived normally even if they had been conscious, such as events that occurred outside the range of their sense organs (Sartori, Badham, & Fenwick, 2006; van Lommel et al., 2001). Ring and Lawrence (1993) published three cases in which they obtained independent corroboration of unconscious patients' accurate out-of-body perceptions from physicians and nurses present during the NDEs. Some of those accurate perceptions included very unlikely objects, such as the plaid shoelaces of a nurse who was present only during the patient's resuscitation and not before or after, and unexpected objects in locations to which the patient did not have access.

Sabom (1998) described the NDE of a woman who underwent hypothermic cardiac arrest to repair a life-threatening cerebral aneurysm. In this truly drastic procedure, her body temperature was lowered to 60°F, and her heartbeat and breathing stopped. After her heart was stopped, her brain waves flattened, and twenty minutes later her brain stem stopped responding to the loud clicks from molded speakers in her ears, indicating total shutdown of her entire brain. At that point, the blood was drained from her body, collapsing the aneurysm so that it could safely be repaired. During this procedure, she met the standard criteria for brain death: her EEG was totally flat, indicating no cerebral electrical activity; auditory-evoked potentials ceased, indicating cessation of brain stem function; and blood was completely drained from the brain, precluding any brain metabolic activity.

The patient reported subsequently that she felt herself pulled out of the top of her head and viewed the operating room from above. She accurately described the twenty doctors, nurses, and technicians in the room, most of whom she had never met, and accurately described several peculiar details of the procedure. This NDE cannot be explained by temporal lobe seizure activity because continuously monitored brain waves showed no such activity. It cannot be explained by reconstruction based on overheard conversations during the operation because her brain stem response to the molded speakers in her ears showed absolutely no response to extremely loud auditory

stimulation. And it cannot be explained by reconstruction based on observations before and after she was anesthetized because she accurately described people, equipment, and events that were not observable either before or after the procedure.

Beauregard, St-Pierre, Rayburn, and Demers (2012) studied thirty-three patients who underwent this drastic hypothermic circulatory arrest procedure over a five-year period. Nine percent of the patients they studied reported conscious mental activity during their procedures. The authors described one patient who reported feelings of peace and joy, seeing a bright light, leaving her body, and observing details of the operation that were later verified by the surgical staff.

NDE Features Suggestive of Postmortem Survival

Individuals who have these veridical out-of-body perceptions usually claim that their mental processes were remarkably clear when they seemed to be separated from their physical bodies, which they experience as a foretaste of their postmortem survival. However, because near-death experiencers are still alive, even though consciousness may seem to be detached from the body, it may still remain dependent on the body for its continued existence. Thus, although veridical out-of-body perceptions near death may bear on the relationship between the mind and the body while it is alive, they do not necessarily tell us anything about postmortem conditions (Ducasse, 1961).

Almost without exception, however, people who have had NDEs hold a firm belief that some part of them will live on after death. Although their ideas about exactly what might happen after death differ from one person to another, there are some recurring patterns in their descriptions of an afterlife existence. For example, two-thirds of the 229 experiencers who participated in a study of NDEs at the University of Virginia believed that in the afterlife we meet loved ones who had died earlier, and 13 percent of the 553 experiencers in another study reported that in fact they had met a deceased loved one in their NDEs (Kelly, 2001).

Some of these cases may be hallucinatory reflections of the dying individual's expectations or may represent defensive attempts to reduce fear of impending death by imagining a reunion with deceased loved ones. This explanation is less plausible for children, who likely know fewer deceased people than do adults and might more naturally hallucinate their living parents or other protectors in times of stress. In fact, however, children virtually never see their living parents in NDEs, and in some cases they describe meeting persons whom they did not know, in sufficient detail to allow their parents to recognize those persons as deceased relatives. In some cases, the child later

identified the person from the NDE in a family portrait he or she had never seen before (Badham & Badham, 1982).

There are other NDEs that cannot be written off as expectation and that may provide some additional evidence for postmortem survival. Sometimes experiencers meet in their NDEs recently deceased people who were not known to have died, excluding the possibility that the vision was a hallucination related to the experiencer's expectations (Greyson, 2010b). For example, one of our research participants was a twenty-six-year-old technical writer who was hospitalized in his native South Africa with a series of nonstop seizures complicated by pneumonia. He recounted his NDE that occurred during a respiratory arrest:

I had been taken very ill, and was three or four weeks in an oxygen tent in status epilepticus, then double-pneumonia, and so on and so on. I was friendly with a nurse from the farm lands of the Western Cape. She had told me it was her twenty-first birthday that weekend, and that her parents were coming in from the country to celebrate. She fluffed up my pillows, as she always did. I held her hand to wish her a happy birthday, and she left.

In my NDE, I met Nurse Anita on the Other Side. "What are you doing here, Anita?" I asked. "Why, Jack, I've come to fluff up your pillows, of course, and to see that you are all right. But, Jack, you must return, go back. Tell my parents I'm sorry I wrecked the red MGB. Tell them I love them."

Then Anita was gone—gone through and over a very green valley and through a fence, where, she told me, "there is a garden on the other side. But you cannot see it. For you must return, while I continue through the gate."

When I recovered, I told a nurse what Anita had said. This girl burst out into tears and fled the ward. I later learned that Anita and this nurse had been great friends. Anita had been surprised by her parents, who loved her dearly and had presented her with a red MGB sports car. Anita had jumped into the car, and in her excitement raced down the highway, de Waal's Drive, along the slopes of Table Mountain, into "Suicide Corner" and a concrete telephone pole.

But I was "dead" when all that happened. How could I possibly know these facts? I was told by Anita in my experience. (Greyson, 2021, pp. 132–133)

This patient had no way of knowing that his nurse had died and no yearning to see her on her weekend off with her parents. This was an apparent encounter with a deceased person that could not plausibly be dismissed as wishful thinking, nor is it a unique case. NDEs in which the experiencers are surprised to meet a loved one they had not known had died are not common, but they do occur. Greyson (2010b) described twenty-eight similar cases that had been recorded throughout the ages, from the first-century Roman historian Pliny the Elder to the present day.

NDEs that involve meeting deceased persons not known to have died cannot be attributed to expectations of a reunion. It is possible that some experiencers might have met some being in their NDEs and, only after learning that a loved one had just died, retroactively identified the being they met as that newly deceased loved one. However, in cases such as that described above, the experiencer told other people about the vision, naming the deceased person, *before* learning of his or her death.

It is possible that some experiencers might envision meeting a person in their NDEs who was still living but likely to have died. If that were the explanation, then there would likely be NDEs where experiencers “guessed wrong” and identified people in their NDEs as deceased who were really still alive. It turns out that there *are* a few NDEs in which experiencers report meeting people who are still alive. Kelly (2001) reported that 7 percent of NDEs involved seeing someone in the realm of the NDE who was still living. But in every one of those rare cases, the experiencer described that person as still living, in most cases pleading with the experiencer to come back. No NDE account has been published in which an experiencer mistakenly thought that a living person he or she had seen in the NDE was deceased.

In some of these cases, the experiencer reported meeting a deceased person he or she *had never met*. For example, van Lommel (2004) reported the case of a patient who, during a cardiac arrest, had an NDE in which he saw a man he did not know. He later learned from his dying mother that he had been born out of an extramarital affair with a man killed during the war. Shown a picture of his biological father, he immediately recognized him as the man he had seen during his NDE. Likewise, Kübler-Ross (1983) reported the case of a young girl who, during heart surgery, had an NDE in which she saw a boy who identified himself as her brother, although she was an only child. Her father, moved by her report, confessed that he had had a son she never knew about who had died before she was born.

These visions of deceased people who were not known to have died are difficult to explain. Experiencers report that these deceased people not only appeared to them but also interacted with them, giving them information. The experiencer’s interpretation in every case was that the deceased person was still somehow conscious and able to interact. But that would require that consciousness—the ability to think and feel—continues after the physical body dies.

IMPLICATIONS OF NDEs FOR THE MIND–BRAIN RELATIONSHIP

Over the centuries, a wide variety of theories have been proposed for the relationship between the mind—the sum total of all your conscious thoughts,

feelings, desires, memories, hopes, and so on—and the brain—that organ inside your skull made up of neurons and supporting glial cells. As Kelly noted in this volume (“Background and Overview”), many (but not all) neuroscientists, physicists, and psychologists believe that the mind and consciousness are produced by or are subjective concomitants of brain states. This “production theory” receives support from the correlation between brain changes and mental changes. However, the observed correlation between brain states and mind states is also compatible with the “transmission” or “filter theory”—that is, that the brain may be a vehicle that receives, transports, and transmits (but is not synonymous with) the mind (James, 1898).

Everyday mental functioning may be adequately described in terms of either the production theory or the filter theory. However, cognition under extreme conditions reveals the limitations of the production theory and the need for a more comprehensive explanatory model. For example, there have been rigorous studies of individuals with normal to high cognitive function despite having both cerebral hemispheres reduced by severe hydrocephalus to as little as 5 percent of the normal volume (Lorber, 1983). Additionally, there have been more than eighty documented cases of the unexpected return of mental clarity and memory, shortly before death, in patients suffering from irreversible brain deterioration as in Alzheimer’s disease (Nahm & Greyson, 2009). A National Institute on Aging workshop recently reviewed the evidence for this paradoxical lucidity in patients with end-stage, irreversible dementia, concluding that current paradigms of dementia need to be reconsidered (Mashour et al., 2019).

Furthermore, although it had been assumed, based on the production theory, that intense experiences brought on by psychedelic drugs would correlate with increased brain activity, recent research has shown the exact opposite. Brain imaging studies of psychedelic drug experiences, using a variety of drugs and a variety of imaging techniques, have consistently suggested that spiritual psychedelic experiences analogous to NDEs are associated with decreased brain electrical activity and decreased connectivity between relevant brain regions (Carhart-Harris et al., 2012, 2016; Lewis et al., 2017; Muthukumaraswamy et al., 2013; Palhano-Fontes et al., 2015; Vollenweider & Komter, 2010). These findings that mystical experiences are accessible only when brain activity is diminished are compatible with the filter theory but not with the production theory.

Proponents of the production theory have argued that, while electrical activity and connectivity are decreased with psychedelic drugs, the variability or diversity of activity across different brain areas is increased (Swanson, 2018). However, this diversity in activity across the brain runs counter to current neurobiological models of consciousness that require greater integration of

activity across the brain. It is difficult to understand how greater fragmentation or random signal fluctuations in the brain can produce the highly structured and experientially rich experiences that are typically described as the most meaningful in life (Kastrup & Kelly, 2018).

NDE Physiology and Mind–Brain Models

NDEs are often triggered when patients are clinically near death, such as during cardiac arrest or some other, usually sudden, loss of vital functions. In a study of 1,595 consecutive admissions to a cardiac care unit, NDEs were reported ten times more often by patients who had survived well-documented cardiac arrest than by patients with other serious cardiac incidents (Greyson, 2003).

The incompatibility of NDEs with the mind–brain production theory is particularly evident in connection with experiences that occur under two conditions—namely, general anesthesia and cardiac arrest. In near-death research at the University of Virginia, 22 percent of NDEs occurred under anesthesia, and those cases include the same features as other NDEs, such as out-of-body experiences that involved watching medical personnel working on the body, an unusually bright or vivid light, meeting deceased persons, and thoughts, memories, and sensations that were clearer than usual.

Studies that have identified reliable EEG correlates of loss and recovery of consciousness during general anesthesia have established that unconsciousness is associated with a profound reduction in brain activity under anesthesia (Huang, Liu, Mashour, & Hudetz, 2018; John et al., 2001; Lee et al., 2019; Pal et al., 2020; Thierry et al., 2018). Additional results supportive of this conclusion derive from other recent functional imaging studies that have looked at blood flow, glucose metabolism, or other indicators of cerebral activity under general anesthesia (Alkire, 1998; Alkire, Haier, & Fallon, 2000; Shulman, Hyder, & Rothman, 2003; White & Alkire, 2003). In these studies, activation in brain areas thought essential for conscious experience is greatly reduced, along with the coupling between them, thereby providing considerable evidence against the possibility that the anesthetized brain could produce clear thinking, perception, or memory.

The situation is even more dramatic with regard to NDEs occurring during cardiac arrest. In four published studies alone, more than one hundred cases of NDEs occurring during cardiac arrest were reported (Greyson, 2003; Parnia et al., 2001; Sabom, 1982; van Lommel et al., 2001). Like NDEs that occur with general anesthesia, those that occur in connection with cardiac arrest include the typical features associated with NDEs, in-

cluding enhanced sensation and mentation, out-of-body experiences, and visions of deceased acquaintances.

However, in cardiac arrest, cerebral functioning shuts down within a few seconds. With circulatory arrest, blood flow and oxygen uptake in the brain plunge to near-zero levels. EEG signs of cerebral ischemia are detectable within six to ten seconds and progress to isoelectricity (flat-line EEGs) within ten to twenty seconds (de Vries et al., 1998; Vriens, Bakker, de Vries, Wienecke, & van Huffelen, 1996). In sum, full arrest leads rapidly to the three major clinical signs of death: absence of cardiac output, absence of respiration, and absence of brain stem reflexes (Parnia & Fenwick, 2002; van Lommel et al., 2001).

Proponents of the mind-brain production theory often object that even in the presence of a flat-lined EEG, there still could be undetected brain activity going on; current scalp-EEG technology detects only activity common to large populations of neurons, mainly in the cerebral cortex. However, the issue is not whether there is brain activity of any kind whatsoever, but rather whether there is brain activity of the specific form agreed on by contemporary neuroscientists as the necessary condition of conscious experience. Activity of this form is eminently detectable by current EEG technology, and it is abolished both by general anesthesia and by cardiac arrest.

In cardiac arrest, even neuronal action potentials, the ultimate physical basis for coordination of neural activity between widely separated brain regions, are rapidly abolished (Kelly et al., 2007). Moreover, cells in the hippocampus, the region thought to be essential for memory formation, are especially vulnerable to the effects of anoxia (Vriens et al., 1996). In short, it is not credible to suppose that NDEs occurring under conditions of general anesthesia, let alone cardiac arrest, can be accounted for in terms of some hypothetical residual capacity of the brain to process and store complex information under those conditions.

A next line of defense of the mind-brain production theory for NDEs is to suggest that the experiences occur not during the actual episodes of brain insult, but rather before or just after, when the brain is more or less functional (Augustine, 2007; Rodabaugh, 1985). However, unconsciousness produced by cardiac arrest characteristically leaves patients amnesic and confused for events immediately preceding and following these episodes (Aminoff, Scheinman, Griffin, & Herre, 1988; Parnia & Fenwick, 2002; van Lommel et al., 2001). Indeed, many NDEs report that although memories of the NDE itself are clear and vivid, memories of events just before and after these episodes are confused or absent. Furthermore, a substantial number of NDEs contain apparent time “anchors” in the form of verifiable reports of events

occurring during the period of insult itself, as in the case described earlier of the anesthetized patient who watched his surgeon flapping his arms.

NDE Phenomenology and Mind–Brain Models

NDEs include phenomena described earlier that challenge the production model (Greyson, 2003, 2010c; Parnia et al., 2001; Schwartz, Stapp, & Beauregard, 2005; van Lommel et al., 2001). Most prominent among these features are enhanced cognition and memory during cerebral impairment (Kelly et al., 2007), accurate perceptions from a perspective outside the body (Holden, 2009), and reported visions of deceased persons, including surprising visions of those not previously known to be deceased (Greyson, 2010b).

Perhaps the most important of these features, because it is so commonly reported in NDEs, is the occurrence of enhanced mental activity at times when, according to the mind–brain production model, such activity should be diminishing, if not impossible. Individuals reporting NDEs often describe their mental processes during the NDE as remarkably clear and lucid and their sensory experiences as unusually vivid, surpassing those of their normal waking state.

An analysis of several hundred NDE cases showed that 80 percent of experiencers described their thinking during the NDE as clearer than usual or as clear as usual (Kelly et al., 2007). An analysis of the medical records of people reporting NDEs showed that, in fact, people reported enhanced mental functioning significantly more often when they were actually physiologically close to death than when they were not (Owens et al., 1990).

An example of enhanced mental functioning during an NDE is a rapid revival of memories that sometimes extends over the person's entire life. In contrast to the isolated and often just single brief memories evoked during stimulation of the temporal lobe, memories revived during an NDE are frequently described as an almost instantaneous panoramic review of the person's entire life (Noyes & Kletti, 1977; Stevenson & Cook, 1995).

Another important feature of NDEs that the mind–brain production theory cannot adequately account for is the experience of being out of the body and perceiving events that one could not ordinarily have perceived. Proponents of the mind–brain production theory attribute the belief that one has witnessed events going on around one's body to (1) memories of objects or events that one might have glimpsed just before losing consciousness or while regaining consciousness, to (2) correct guesses about events that were likely to have occurred, or to (3) retrospective imaginative reconstruction based on a persisting ability to hear, even when unconscious (Saavedra-Aguilar & Gómez-Jeria, 1989; Woerlee, 2004).

Such explanations are inadequate, however, for several reasons. As noted before, memory of events occurring just before or after loss of consciousness is usually confused or completely absent (Aminoff et al., 1988; Chen et al., 2016; Gerlai & McNamara, 2000; Parnia & Fenwick, 2002; Pryor et al., 2010; van Lommel et al., 2001). In addition, many NDE reports include perceptions of events that were extremely unlikely to have occurred, such as the surgeon flapping his arms or the nurse with mismatched shoelaces mentioned earlier.

Furthermore, anecdotal reports that adequately anesthetized patients retain a significant capacity to be aware of or respond to their environment in more than rudimentary ways—let alone to hear and understand—have not been substantiated by controlled studies (Ghoneim & Block, 1992, 1997). The phenomenology of awakenings under anesthesia is altogether different from that of NDEs and often extremely unpleasant, frightening, and even painful, typically brief and fragmentary and primarily auditory or tactile but not visual (Osterman, Hopper, Heran, Keane, & van der Kolk, 2001; Spitellie, Holmes, & Domino, 2002). There is no convincing evidence that memories of complex sensory experiences occurring during general anesthesia could have been acquired by the impaired brain itself during the period of unconsciousness. Furthermore, any such explanatory claims are even less credible when, as commonly happens, the specific sensory channels involved in the reported experience have been blocked as part of the surgical routine—for example, when visual experiences are reported by patients whose eyes were taped shut during the relevant period of time.

A third important feature of NDEs is the reported visions of deceased persons, including surprising visions of those not previously known to have died or not previously known at all to the experiencer (Greyson, 2010b). Clearly, if the mind is produced by and totally dependent on the brain, then consciousness cannot persist after death of the brain, rendering such visions impossible. Survival of consciousness after death requires that minds be able to function independent of physical brains.

In sum, the central challenge of NDEs to the mind–brain production theory lies in asking how complex consciousness, including mentation, sensory perception, and memory, can occur under conditions in which current neurophysiological models deem it impossible. This conflict between a materialist model of brain producing mind and the occurrence of NDEs under conditions of general anesthesia and/or cardiac arrest is profound and inescapable. Only when we expand models of mind to accommodate extraordinary experiences such as NDEs will we progress in our understanding of consciousness and its relation to the brain.

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CASES OF THE REINCARNATION TYPE

Jim B. Tucker

Children's claims of remembering a life before their current one have been the focus of systematic study for the past sixty years. Some of the children have provided details that proved strikingly accurate for an individual who lived in the past, sometimes at great distance from the child's family. Along with the other features of the cases, the verification of the children's claimed memories constitutes evidence of postmortem persistence of consciousness of one sort or another.

Even before systematic study of the phenomenon began, sporadic reports of such cases had appeared, including small series of cases. Ian Stevenson (1960), then chairman of the Department of Psychiatry at the University of Virginia, wrote a review of the reports in 1960. Following publication of that paper, Stevenson began hearing about new cases. In 1961, he traveled to India and Sri Lanka (then Ceylon) after learning of a few cases and, once there, found twenty-five (Stevenson, 1989). He devoted increasing amounts of time to the research, eventually stepping down as chairman of the department and establishing a research unit, now known as the Division of Perceptual Studies. He then focused full-time on work in parapsychology, particularly related to the question of survival after death and especially past-life memories, until his retirement in 2002. In the intervening decades, he produced a remarkable body of work, documenting scores of these cases in extensive detail (e.g., Stevenson, 1974, 1997a, 2001). He termed them "cases of the reincarnation type" (CORT) to emphasize that he was not indicating their etiology, only their appearance.

Stevenson and the researchers who followed him have studied more than twenty-five hundred cases from around the world. Stevenson began studying the phenomenon by investigating cases wherever he could find them. This

process took him typically to cultures with a general belief in reincarnation. Thus, his first book of these cases included ones from India, Sri Lanka, Brazil, the Tlingit of Alaska, and Lebanon (Stevenson, 1974). Numerous cases were also found in Thailand and Burma (Myanmar) and eventually wherever anyone looked for them, on all the continents except Antarctica. As Stevenson published his findings, he also began to hear occasionally from American families. Recent increases in the Division of Perceptual Studies' profile, along with the advent of the internet, have led to increasing numbers of reports in the United States, and the division has heard from more than a hundred American families in the past year.

The cases provide several types of evidence supporting a carryover of consciousness, beginning with the claimed memories.

CLAIMED MEMORIES

Children who report memories of a past life usually do so at a very early age, from around two or three until six or seven. The mean age when they start is thirty-five months (Tucker, 2005). Although the apparent memories of children who begin at later ages appear sometimes to be triggered by environmental stimuli (Matlock, 1989), the children's statements typically appear to begin completely spontaneously. The children generally report memories from an ordinary life rather than a famous one, and from a recent one. The one noteworthy aspect of the previous life is often that it ended prematurely. The mode of death involved unnatural means—accident, murder, suicide, or combat—in 70 percent of the cases, while in the natural death cases, the deceased individual—termed the “previous personality” by Stevenson—tended to be young, with a quarter being fifteen years old or less (Tucker, 2013).

When talking about a previous life, the children often focus on people and events from near the end of it. Seventy-five percent of them describe how they died in the purported life (Tucker, 2005). The specificity of their statements varies from case to case. In order for them to be considered verified, they must be specific enough so that they could reasonably apply to one and only one deceased individual from the past. This usually requires that the child give names from the past life, those of people and/or places. Without them, children may give numerous details, but they prove to be unverifiable. The emphasis in researching a case is to determine whether the child's statements can be verified to fit the life of a particular person as well as whether the child might have had access to the information through some sort of ordinary means. This is often the case if a child claims to remember being a deceased family member or a friend or acquaintance of the family, lessening

the evidentiary value of the case substantially. In the majority of the cases studied, however, no such link is known.

Some, like the four cases below, show close matches between the child's statements and facts of the life of a previous personality unknown to the child's family. Cases vary in the richness of detail of the purported memories and the quality of documentation of the child's statements. These four, two from Stevenson's early work in Asia and two more recent U.S. cases, serve as good examples of the phenomenon. They are all strengthened by the existence of records of the children's statements that were made before the previous personality was identified. The vast majority of cases do not include such documentation, an issue I will address later in the chapter.

The Case of Kumkum Verma

Growing up in a village in India, Kumkum Verma began talking about a past life when she was three and a half years old. She said that in her last life, she had lived in Darbhanga, a city of two hundred thousand people that was twenty-five miles away from her home village. She named the section of the city where she said she had lived, a commercial district where artisans, craftsmen, and small-business owners lived. Kumkum's father was an educated landowner, and her parents did not know anyone there.

Her father talked about her past-life claims with a friend who was from Darbhanga. He had an employee from the section Kumkum had named, and that person was eventually able to identify a deceased woman whose life Kumkum seemed to be remembering. Her family belonged to a relatively low artisan class and would have been unlikely to have social contact with a family like Kumkum's. In fact, the families had very little contact even after the previous personality was identified. The woman's grandson visited Kumkum's family twice, and while Kumkum's father went to Darbhanga once to meet the previous family, he never allowed Kumkum to meet them.

Six months before anyone attempted to verify Kumkum's statements, her aunt wrote down many of them. Some of her notes were lost, but Stevenson was able to get a partial copy that included eighteen statements. All of them eventually proved to be accurate for the identified previous personality. They included the section of Darbhanga where she lived as well as her son's name and the fact that he worked with a hammer, her grandson's name, the name of the town where her father lived, the location of his home near mango orchards, and the presence of a pond at her house. They also documented small personal details, such as an iron safe at her home, a snake she fed milk to that she kept near the safe, and a sword hanging near the cot where she slept (Stevenson, 1975, pp. 206–240).

The Case of Sujith Jayaratne

Another of Stevenson's cases involved a boy named Sujith, who lived in a suburb of Colombo, the capital of Sri Lanka. As a baby, he began showing an intense fear of trucks. When he became old enough to talk, he described a life in a village named Gorakana, which was seven miles away. A monk made notes of conversations he had with Sujith when the boy was two and a half, and Stevenson was able to get a translated copy of them. The notes document that Sujith said he was from Gorakana and lived in the section of it called Gorakawatte. His father was named Jamis and was missing an eye (Sujith pointed to his right eye to indicate it was the defective one). He attended the *cabal iskole* (meaning "dilapidated school"), where he had a teacher named Francis. He gave money to a woman named Kusuma, who prepared a type of food for him called string hoppers. He suggested that he gave money to the Kale Pansala, or Forest Temple, where there were two monks, including one named Amitha. He also said that his house was whitewashed and had a lavatory beside a fence and that he bathed in cool water.

The monk then went to Gorakana and found that all of Sujith's statements matched the life of one Sammy Fernando, a fifty-year-old man who had died six months before Sujith was born, after being hit by a truck. Stevenson investigated the case a year after the monk's trip to Gorakana and verified the matches, including the previous father Jamis's bad right eye (Stevenson, 1977, pp. 235–280).

The Case of James Leininger

James, the son of an American couple in Louisiana, began having repeated nightmares around the time of his second birthday. His parents would observe him thrashing about and kicking his legs in the air while shouting, "Airplane crash on fire! Little man can't get out." After a few months of this behavior, his parents were able to have several conversations with him about his dreams, usually as he was preparing to go to sleep. He indicated that they were memories of events from the past. He said his plane had crashed on fire and that it had been shot down by the Japanese. He said the plane was a Corsair, which was a fighter plane developed during World War II, and that he had flown it off a boat. When his parents asked him the name of the boat, he said, "Natoma." When asked what his name was then, he would always just say "me" or "James." When his parents asked him whether he could remember anyone else who was there, he gave the name Jack Larsen. Then, when he was two and a half, he pointed at a picture of Iwo Jima and said his plane had been shot down there.

James's father was initially dismissive of the idea of past lives, but he began investigating James's claims. He learned that USS *Natoma Bay* was an escort ship stationed in the Pacific during World War II. It took part in the Iwo Jima operation, during which it lost one and only one pilot: a young man from Pennsylvania named James Huston.

A complete record of James's statements made before Huston was identified does not exist, but various pieces of documentation do, including his father's correspondence as he researched the events as well as a television interview that was recorded before Huston was identified in which James's parents discussed his statements and behaviors. The items described above were all verified to match for Huston, with two caveats: James said he was flying a Corsair; Huston was actually flying a different plane, an FM-2, when he was killed, but he had flown a Corsair previously, being part of the squadron that tested it for the navy. And although Huston was killed during the Iwo Jima operation, his death occurred during a strike against transport vessels in a harbor on a nearby island.

In addition to the above, James said his plane got shot in the engine and crashed in the water. Eyewitnesses confirmed that Huston's plane was hit in the engine, and military records document that his plane hit the water and quickly sank. They also show that one of the other pilots who took part in the strike on the day Huston was killed was named Jack Larsen (Tucker, 2013, pp. 63–87; Tucker, 2016).

The Case of Ryan

Ryan, a boy from the southwestern United States, was four years old when he began describing a past life in Hollywood. He would cry and beg his mother to take him there so he could see his other family. One day, Ryan and his mother were looking at a book on Hollywood when they saw a picture from a 1932 movie called *Night after Night*. Ryan became excited when he saw it. He pointed to one of the men in the picture and said that's who he had been in his past life. The book didn't list the people in the picture, and Ryan's mother later discovered that the man Ryan pointed to had no spoken lines in the movie. She contacted our office at the Division of Perceptual Studies to ask for help in identifying him. That proved to be difficult, and as we searched, Ryan's mother sent frequent e-mails documenting Ryan's numerous statements about his past life. Eventually, a Hollywood archivist went to the library of the Academy of Motion Picture Arts and Sciences and reviewed all the materials there on *Night after Night*. They included one picture that identified the figure Ryan had pointed to, a man named Marty Martyn.

Although information about Marty Martyn is now available online, it came out only after this case had been publicized. At the time we first identified Martyn, there was essentially nothing online about him. Only by interviewing Martyn's family and obtaining records from various places were we able to assess how accurate Ryan's statements were for him. Ryan had said that he danced onstage in New York, and Martyn danced on Broadway. Ryan said he then went to Hollywood to work in movies, which Martyn did, working mostly on dance in films. Ryan said he then worked at an agency where people changed their names, and Martyn started a successful talent agency. Ryan talked of seeing the world from big boats and visiting Paris; Martyn and his wife went to Europe on the *Queen Mary* and visited Paris. Ryan said he lived in a big house with a swimming pool, which Martyn did, and Ryan said its street address had the word "Rock" or "Mount" in it. Martyn's house was on North Roxbury. Ryan also said he was sixty-one when he died, and even though Martyn's death certificate said he was fifty-nine, we eventually found overwhelming evidence that Martyn was in fact sixty-one. In all, Ryan made more than two hundred past-life statements, most of which were details about daily life that were unverifiable. Even so, along with a few statements that were incorrect for Martyn, we were ultimately able to verify that fifty-five of his statements did match Martyn's life (Tucker, 2013, pp. 88–119).

RECOGNITION TESTS

Some of the cases have involved instances in which the children were thought to recognize people or objects from the previous life. Stevenson (2001) wrote about three kinds of recognitions. In one type, the child unexpectedly or spontaneously recognized someone from the past life during a chance encounter—seeing the person walking down the street, for example. In the strongest of these, no one with the child knew that individual, so, for example, one girl in Thailand was with her mother when she recognized an aunt of the previous personality who was unknown to the girl's mother (Stevenson, 1973).

In a variant in some cases, the previous personality is identified because the children see people or places and say they remember them from their previous life. Ryan, in the case above, identified himself from a picture of Marty Martyn, and it was only later that Ryan's claims about a past life were found to match Martyn's life. Similarly, Gamini, a boy in Sri Lanka, talked repeatedly about a past life without naming a place or giving a last name. After six months, he and his family were on a bus trip when, during a brief stop, Gamini said that the place where they were stopped had been his home. His mother's cousin, a well-known monk, then looked into the matter, eventually

taking Gamini back to the area, where he was judged to recognize a number of people and places (Stevenson, 1977, pp. 43–76).

Other cases have included uncontrolled tests, usually by the child's parents. As Stevenson (2001, p. 113) wrote, they may take the child to meet members of the previous family, and after they ask such leading questions as "Do you see your wife here?" the expectant stares of the assembled group toward the previous personality's wife can make it nearly impossible for the child to answer incorrectly. In other cases, participants have tried tests that were at least *more* controlled than those. In an American case, a boy was thought to be his paternal grandfather reborn. His grandmother died when the boy was four and a half. His father returned from disposing of her belongings with family photos the boy had not seen before. His mother showed him a class picture from when his grandfather was in grammar school and asked him to pick himself out. The picture showed twenty-seven children, including sixteen boys, and the boy correctly pointed to his grandfather (Tucker, 2005, pp. 141–143).

Investigators have rarely been able to test the children firsthand. Doing so requires that the investigators get to the children while they are young enough to still report significant memories of the past life and also before they have seen the people from that life.

The Case of Gnanatilleka Baddewithana

Gnanatilleka was a girl in Sri Lanka whose case was originally investigated by a journalist, H. S. S. Nissanka (2001), with the assistance of a Buddhist monk and a teacher. The three of them met Gnanatilleka when she was four and a half. She had talked about a past life in Talawakelle, a town sixteen miles from hers. The men went to Talawakelle and learned of a teenage boy who had died a couple of years before Gnanatilleka was born. His life matched the details Gnanatilleka had given, so the men arranged for her to meet members of the boy's family at an inn in Talawakelle without telling her the purpose of her trip there. They had members of the boy's family come in one by one as well as a man the boy had not known.

Gnanatilleka was able to identify the relationship the boy had with each individual—"she's my Talawakelle mother," for example—including both parents, his brother, and his two sisters. She also gave details about them that were not obvious from their appearance, saying that she went to school by train with one sister and that the other one lived in a house below the family's. She said she remembered going there to sew clothes, which the boy had done. When presented with a man who had moved to Talawakelle after the boy had died, Gnanatilleka said she did not know him.

Stevenson (1974, pp. 131–149) met Gnanatilleka a year later and interviewed members of both families. He then continued to check in on them from time to time. One statement Gnanatilleka had made early on was that she had a sister named Lora (or sometimes Dora). The previous boy did not have a sister with such a name, but he had a classmate named Lora, whom Stevenson interviewed. She had never met Gnanatilleka, so, unannounced, he took Lora and one of her friends whom the boy had not known to Gnanatilleka's home. He asked Gnanatilleka, who was almost fifteen by then, whether she recognized the two women. She called Lora "Dora," confusing the names as she had done when she was younger, and said she had known her in Talawakelle.

The Case of Grant P.

At the Division of Perceptual Studies, increased outreach efforts have raised our profile, including online. This has led more American families to learn about our work and to contact us earlier, when their children are still young. This has allowed for testing children with photographs to see whether they can identify individuals the previous personality knew. In two currently unpublished cases, children were shown pairs of pictures and asked whether either was familiar, and they consistently responded by picking the correct one.

One of them, Grant P., is a boy who told his mother from a very early age that she was not his only mother. When he was five, he asked his parents one day whether they remembered when he was in the war. He said he was in the army and described being on the beach and in the jungle. When he said this was in 1969, his parents asked him whether he was talking about Vietnam, and he said he was. He said he had died in an explosion when he was twenty-one. After he gave a last name (an unusual one) and a state he said he was from, his mother went to the Vietnam Memorial website and learned that a man with that name from that state had been killed in Vietnam when he was twenty-one. She reported that she showed Grant pictures of numerous men on the site, and when he saw the picture of the man with the correct name, he said that was who he had been.

When I met with the family, I brought three pairs of pictures, the result of online searching. These included pictures of two large Central High Schools, along with pictures of the house where the identified previous personality had lived when he was in high school and the house across the street from that one, both presented with control pictures. Grant picked the correct school. He did not make a selection for the house the man had lived in (how its appearance may have changed in the past fifty years is unknown), but he picked the correct one for the house across the street.

After the meeting, I continued searching online and subsequently e-mailed Grant's mother additional pairs of pictures to show him. These included pages from the man's 1968 high school yearbook with control pictures from the 1968 yearbook of another high school. One pair showed the school's administration, while others were a page of teachers and one showing student pictures. Grant picked the correct yearbook for all three tests. I did not tell his mother ahead of time which pages were the correct ones, so there was no chance that he was aided by any cues from her. In fact, she expressed surprise when I informed her that he was correct on all three, commenting on how casual he had been as he made his selections. Soon thereafter, I sent her pictures of the previous man's parents that I had gotten from a family member of his, plus control pictures. Grant did not make a choice for the mother but picked the correct photo of the father.

Altogether, Grant was shown eight pairs of pictures. He made identifications in six of them (some with more expressed confidence than others), and he was correct in all six. The likelihood of his doing so purely by chance would be 1 in 2^6 , or 1 in 64. In four of the tests, there was no possibility that he benefited from cuing since his mother was blind to the correct answers, an important precaution when feasible for any such testing.

In cases like this, one potential criticism is that parents could find similar pictures ahead of time and coach the children. In Grant's case, this would have required quite deliberate, extensive fraud, as the information did not come up on a search automatically. I had to join an online newspaper archive site to access the previous personality's obituary. From there, it took multiple steps to uncover the information I was eventually able to find. Even if parents were to attempt a fraud, it would be extremely difficult for them to adequately prep a five-year-old, particularly since they wouldn't know what people or places I would use to test their child. Having met Grant's family, I find the scenario quite implausible in his case.

Although the internet increases the chances that families can learn about potential previous personalities before we have an opportunity to document the child's statements, it also increases substantially the information we can uncover and use to test the children. Thus, we can expect this type of evidence to become more significant in the future as more cases present with the potential for testing.

BEHAVIORAL AND EMOTIONAL FEATURES

The children often show emotions and behaviors that appear linked to their claims about a previous life. The emotions can include apparent continued

attachment to figures from the previous life, with the child repeatedly begging to be taken to the location of the previous family. Their reactions to members of the previous family can vary, consistent with the relationship the previous personality had with the different individuals. Gnanatilleka, described earlier, was very friendly with the previous personality's sisters and one of his teachers, but she showed real disdain for his brother, who had reportedly treated the previous personality poorly. Similarly, a girl in Thailand was thrilled to meet the previous woman's daughter but indifferent and even hostile toward the previous husband, with whom the previous woman had barely spoken in the last years of their unhappy marriage (Stevenson, 2001). The attachment the child shows toward previous family members usually (though certainly not always) lessens as the child grows up. In at least one case in Burma, the child grew up and married the widow of the previous personality (Stevenson, 1997a, pp. 212–226).

One behavior that is frequently present is a phobia (Stevenson, 1990). In cases in which the previous personality died by unnatural means, 35 percent of the children show an intense fear toward the mode of death (Tucker, 2005). One girl in Sri Lanka, for example, hated being immersed in water essentially from the time of birth. It would take three adults to hold her down to give her a bath when she was an infant. When she became old enough to talk, she reported memories of being a girl in a nearby village who had drowned in an accident a year and a half before she herself was born (Stevenson, 1977, pp. 15–42).

Although they don't necessarily have the full syndrome, the children can show features of posttraumatic stress disorder (Haraldsson, 2003). James Leininger, cited earlier, didn't have a phobia of planes—he instead had a great interest in them—but, along with his nightmares about a crash, he would repeatedly take his toy planes, say, “Airplane crash on fire,” and slam them into the family's coffee table, eventually producing dozens of scratches and dents (Tucker, 2013). This kind of compulsive repetition is often seen in children who have survived or witnessed a major trauma and is known as posttraumatic play (Terr, 1981). James had experienced no such trauma (in his current life), and yet he inexplicably showed features of a traumatized child. Stevenson (2001) described other children who seemed to reenact the previous death, including a boy in Burma who recalled the life of a man who hanged himself and would walk around his village with a rope around his neck.

Other children show themes in their play associated with different aspects of the previous life, often the occupation of the previous personality. In one series of 278 cases, 24 percent engaged in play that was unusual for their families and that appeared connected to their past-life memories. In some cases, the child engaged in the play before voicing the memories. The play

occupations corresponded to the ones from the past life, and cases included a boy who played so compulsively at managing a biscuit and soda water shop that he fell behind significantly at school; two girls in middle-class families who played at being “sweepresses” (women who sweep streets and clean latrines); and the son of an unskilled laborer in Turkey who played at managing a nightclub, enlisting a neighborhood girl to serve as the singer by holding a stick to represent a microphone and putting out two chairs for the two wives of the previous personality, a nightclub owner in Istanbul (Stevenson, 2000).

Another aspect of play in these cases can involve gender. In the 10 percent of our cases in which children recall a previous life as a member of the opposite sex, many of them show striking gender nonconformity (Tucker & Keil, 2001). Most young children in various cultures in the general population show gender-typical behaviors, such as stereotypical preferences of trucks for boys and dolls for girls. Gender nonconformity, in which a child shows behaviors more commonly associated with the opposite sex, is a nonpathological trait that by age seven is seen in up to 3 percent of boys and 5 percent of girls (van Beijsterveldt, Hudziak, & Boomsma, 2006). A recent analysis found that 80 percent of the children who reported memories of a life as a member of the opposite sex showed gender nonconformity, compared to only 5.8 percent of children with memories of a life as a member of the same sex (Pehlivanova, Janke, Lee, & Tucker, 2018).

Some of the children show likes and dislikes that are similar to those of the previous personality. Stevenson and Keil (2005) studied twenty-four cases of Burmese children who claimed they were Japanese soldiers killed in Burma during World War II. They showed various associated behaviors, and some of them complained about the spicy Burmese food and asked for raw fish instead. Likes and dislikes can also include fondness for addictive substances if the previous personality was a heavy user. For example, Sujith, described earlier, would ask for cigarettes and arrack, a liquor that the previous personality transported in illegal trade, with one neighbor even obliging him until Sujith’s grandmother put a stop to it. In addition, Sujith had shown an intense fear of trucks before he could even speak, and the previous personality died after getting hit by a truck.

Some children can show multiple behaviors that individually may not be overly impressive but are part of a consistent pattern of behaviors and statements that together suggest a child who is being affected by memories of a life in the past. In other cases, the behaviors can be so striking and the emotions so intense that they contribute to the sense that something very much out of the ordinary is occurring. They also contribute to the sense that the process of carryover from a past life (if that is what the cases are) is a multidimensional one, seemingly involving much more than just information transfer.

BIRTHMARKS AND BIRTH DEFECTS

As soon as Stevenson started investigating CORT, he began to learn of instances in which a child with a birthmark or birth defect reported memories of suffering a wound in a past life, usually a fatal wound during a violent death, that corresponded to the mark or defect (Stevenson, 1993). He eventually published a two-volume set of more than two hundred such cases (Stevenson, 1997a).¹ He noted that the birthmarks are often different from the common, small discolorations that many people have. They can be unusual in shape or size, and they are often puckered or raised rather than flat. Other researchers have subsequently documented additional cases (Haraldsson, 2000a, 2000b; Pasricha, Keil, Tucker, & Stevenson, 2005).

In these cases, the researchers have examined the child in question and photographed their marks or defects. They have interviewed the child's family and asked them about when they first noticed the lesions, whether other family members have similar ones, and whether the mother was exposed to known causes of defects while she was pregnant. The researchers have then interviewed the previous personality's family. They judged how well the child's statements matched the previous life and asked whether the family knew of any access the child might have had to the relevant information. They also attempted to determine with as much precision as possible what wounds the previous personality suffered in order to assess how well they corresponded to the child's marks or defects. They obtained autopsy records when possible, but these were often unavailable or never even existed. Stevenson (1993) reported that he was able to obtain an autopsy report in 49 out of 210 cases. In the other cases, the researchers have typically interviewed firsthand eyewitnesses who saw the wounds on the body of the previous personality. Their efforts have produced cases in which birthmarks or defects add significantly to the evidence for a link to the previous life.

The Case of Chanai Choomalaiwong

Chanai Choomalaiwong is one of eighteen cases that Stevenson (1997a, pp. 933–934) listed in *Reincarnation and Biology* in which a child was born with *two* birthmarks that corresponded to the entrance and exit wounds on the body of a gunshot victim. Chanai was born in Thailand in 1967. He had two birthmarks, one on the back of his head and one above his left eye. When he was three, he began talking about a past life, saying he was a teacher named Bua Kai who had been shot and killed one day on the way to school. He gave the names of various family members and begged to be taken to his previous parents' home in a place called Khao Phra, which was fifteen miles from his

village. He and his grandmother eventually took a bus there, and he then led her to a home where he said his parents lived. It belonged to a couple whose son, Bua Kai Lawnak, had been a teacher who was murdered on his way to school five years before Chanai was born. Chanai identified Bua Kai's parents, who were present among other family members, and he later recognized one of the teacher's daughters and asked for the other one by name. He insisted that Bua Kai's daughters call him "Father," and if they did not, he refused to talk to them. The previous family tested Chanai by asking him to pick out Bua Kai's belongings from others, which he was able to do.

Stevenson was not able to get an autopsy report on Bua Kai, but he talked with several of his family members, who said he had two head wounds from being shot. Bua Kai's wife stated that the doctor who examined his body told her he knew Bua Kai had been shot from behind because he had a characteristically small, round entrance wound on the back of his head and a larger, more irregular exit wound on his forehead. These matched the appearance of both of Chanai's birthmarks, the small round one on the back of his head and the larger, more irregularly shaped one on his forehead. The second one was higher up on Chanai's forehead by the time he was photographed at age eleven than Bua Kai's described wound, but his family said it had been lower when he was younger and then migrated up as he grew (Stevenson, 1997, pp. 300–323).

The Case of Purnima Ekanayake

Haraldsson (2000a) studied the case of Purnima Ekanayake in Sri Lanka. She was born with a group of lightly colored birthmarks over the left side of her chest and her lower ribs. She began talking about a past life, and when she was four, she saw the Kelaniya temple on television and said she recognized it. When she later went on a school trip to see the temple, which was nearly 150 miles away, she said she had lived on the other side of the river that flowed beside the temple grounds. By the age of six, she had made some twenty statements about a past life. A new teacher began working in Purnima's town while spending his weekends in Kelaniya, where he and his wife lived. Purnima's father told him about Purnima's talk of a past life, and he and his brother-in-law decided to investigate to see whether Purnima's reported memories were accurate.

The teacher told Haraldsson that Purnima's father had given him four items to check: she had lived on the other side of the river from the Kelaniya temple, she made Ambiga and Geta Pichcha incense sticks (brands that were not available in Purnima's area and that her parents had never heard of), she was selling incense sticks on a bicycle, and she was killed in a collision with a

big vehicle. He and his brother-in-law found that there were three small family incense businesses in the area across the river from the Kelaniya temple. The owner of one of them called his brands Ambiga and Geta Pichcha. One of his associates had been hit by a bus and killed while taking incense sticks to the market on his bicycle two years before Purnima was born.

Haraldsson was able to get a copy of the man's autopsy report. It showed that he had fractured ribs on the left, a ruptured spleen (in the upper left part of his abdomen), and abrasions running diagonally from his right shoulder across his chest to his left lower abdomen. These corresponded to Purnima's birthmarks over her chest and ribs.

Along with such *birthmark* cases, Stevenson documented numerous examples in *Reincarnation and Biology* of children with *birth defects* thought to be connected to a previous life. Although the child's parents either knew (or at least knew of) the previous personality or were related to that person in most of the cases, they can include some compelling aspects.

The Case of Semih Tutuşmuş

Semih Tutuşmuş was a boy in Turkey who was born with a severely deformed right ear, with the external ear being only a linear stump, plus an underdeveloped right side of his face, a condition known as hemifacial hypoplasia. Semih's father had known a man who was killed by a shotgun blast to the right side of his head in what was said to be an accident when a neighbor was hunting and said he mistook the man for a rabbit. Semih's mother did not know the deceased man personally but had heard about his death.

By his parents' report, Semih began talking about a past life when he was around one and a half years old, when he stated the name of the man who had shot the previous personality. He made a number of subsequent statements, giving details about being shot and stating the names of the previous personality, his wife, and all six of his children. After he met the family, he visited them frequently, sometimes several times a week, and he wept at age eleven when he learned that the previous personality's widow had died. He also expressed great animosity toward the neighbor who shot the previous personality, claiming he did it intentionally (Stevenson, 1997a, pp. 1382–1403).

This case illustrates how the available evidence can sometimes lend itself to interpretation in radically divergent ways. On the one hand, here is a child who was born with an extraordinary birth defect soon after the death of a man from an injury that was quite similar to the defect. If we accept the family's report at face value, the boy then gave numerous names and details from the life of that man and showed emotions the man would have felt. This certainly seems to suggest a connection of some kind to the previous life. On the other

hand, the case can be seen alternatively as one in which a child is born with a birth defect in a community where people believe in reincarnation. They consider past lives a cause for such defects and conclude the child must have been the man from nearby who had recently died from a similar injury. The death was undoubtedly talked about in the community, and, according to this scenario, Semih came to believe, with his family's encouragement, that the facts he learned about the man were memories he had from his previous life.

The Case of William

William was an American boy who began passing out soon after he was born (Tucker, 2005). He was diagnosed with pulmonary valve atresia, a condition in which the valve of the pulmonary artery, which takes blood from the heart to the lungs, does not form properly, preventing adequate blood flow. Because of that, one of the chambers of his heart, the right ventricle, also failed to develop properly. In addition, he had a hole in the wall separating the right and left atria, the two small chambers above the ventricles (Pasricha et al., 2005). He underwent several surgeries, and his development then progressed well.

One day when William was three years old, his mother was trying to do work in her home office when William kept acting up. She finally threatened to spank him, and he responded, "Mom, when you were a little girl and I was your daddy, you were bad a lot of times, and I never hit you!" (Tucker, 2005, p. 2). He later talked about being his grandfather a number of times, including describing the two cats the family owned and even correctly stating the nickname that his grandfather had given one of them.

William also described his grandfather's death, giving accurate details. His grandfather was a retired New York City policeman who was working as a security guard when he walked into a robbery at an electronics store one night after work. He pulled out his revolver but was shot six times by the assailants. His autopsy report stated that the fatal shot went through his left lung and lacerated his left atrium and main pulmonary artery. There was a lacerated wound of his left ventricle as well as a lacerated wound of the main pulmonary artery (Pasricha et al., 2005).

William had defects matching some but not all of his grandfather's injuries. Having all of them might well have been incompatible with life, and even surviving the ones he did have was possible only because of quick surgical intervention. A baby with those defects born in one of the Asian villages where Stevenson found so many cases would undoubtedly have died in infancy.

In sum, though the strength of the evidence of a connection between the child and the previous personality varies from case to case, as Stevenson

readily acknowledged, it is clear that some children are born with birthmarks or birth defects and later describe memories of being an individual who suffered similar wounds. The birthmarks are often unusual in appearance, and some of the defects are quite rare. Occurring as they do in children who later display knowledge about various aspects of the previous personality's life—knowledge to which they had no normal access—they provide evidence that cannot be easily dismissed.

THE CUMULATIVE DATABASE

The Division of Perceptual Studies has constructed a database in which each case is coded on two hundred variables. In a long-term project, all the previous cases going back to Stevenson's in the 1960s are being coded, and the database now contains more than twenty-two hundred cases. This allows for statistical modeling and analysis in a way that cannot be done at the level of individual cases. For example, we have long wondered why more boys than girls talk about past lives. Since 90 percent of the children talk about a life as a member of the same sex, another way of considering the question is to ask why more of the past lives involve males. Using the database provides a potential answer. It reveals that in cases in which the cause of death is known, the cases where the previous personality died of natural causes include roughly 50 percent males and 50 percent females. It is in the ones involving unnatural deaths where the difference in sexes shows up, with the previous personality being male 73 percent of the time. Unnatural deaths in the general population show the same pattern. Men are more likely than women to experience unnatural deaths because they engage in more high-risk behaviors, and one tabulation for five years of deaths (in the United States) showed that males accounted for 72 percent of the unnatural deaths (U.S. Centers for Disease Control and Prevention, n.d.). Thus, the sex breakdown by mode of death for our collection of cases matches precisely what we would expect if they are in fact a sample of lives from the past (Tucker, 2013).

In an early effort when a more partial cohort of cases had been coded, a strength-of-case scale was developed that assigned points to cases based on four criteria: birthmarks and birth defects corresponding to wounds on the previous personality, verified statements about the previous life, unusual behaviors related to the previous life, and the distance (both socially and geographically) between the families of the child and the previous personality (Tucker, 2000). It was then used to consider what factors may correlate with the strength of a case. In the stronger cases, the children were more likely to

start talking about a past life at an earlier age, and they also tended to show more emotion in recalling the life.

Also considered was the possibility raised by critics that enthusiastic parents promote and enlarge their children's claims and end up making the cases appear stronger than they really are. If this were true, we would expect an initial positive attitude by the child's parents toward the claims to correlate with the apparent strength that the case eventually attained. When the initial attitude of each parent was compared to the case's strength-of-case score, however, no correlation was found, lending no support for such a possibility. The strength-of-case score did correlate with the amount of acceptance of the child's claims by the family of the previous personality, implying that those families use criteria similar to ones in the scale in assessing the legitimacy of a case.

Another analysis looked at cases in which the children said they remembered events that occurred during the intermission between lives. These intermission memories can include an initial transitional stage that may contain activities such as observing the previous family as they grieve or witnessing the previous personality's funeral, sometimes with verified details. A second stage can follow that usually involves a stable existence either in an earthly location or in another realm. A final stage can include moving toward their current life. For example, some of the children say that before being born, they observed their current parents, and they sometimes give accurate details about their behavior. For example, in the cases above of James Leininger and Ryan, both boys related facts that startled their parents.² The analysis found that the cases in which children reported intermission memories tended to be stronger for past-life memories than ones in which they didn't. The cases with intermission memories scored higher on the strength-of-case scale, and the children made more statements about the identified previous life that were verified to be accurate and also recalled more names from that life. This suggested that the intermission reports should be carefully considered since they seem to be part of a pattern of a stronger memory for items preceding the children's current lives (Sharma & Tucker, 2004).

As noted earlier, when cases in which the child recalls a previous life as a member of the opposite sex were assessed more recently, it was found that 80 percent of those children exhibited gender nonconformity compared to only 5.8 percent of children reporting same-sex memories. To assess whether the children's gender nonconformity could have led them to fantasize a past life as a member of the opposite sex, the analysis was repeated using only the cases in which a previous personality had been identified whose life matched the child's statements. In this sample involving only actual lives from the past

rather than potentially imagined ones, the statistics remained essentially unchanged. In addition, scenarios that might lead parents to incorrectly interpret their child's gender nonconformity as an indication of a past life as a member of the opposite sex were considered: situations in which a family member of the opposite sex had recently died, the presence of birthmarks on the child that were similar to fatal injuries a family member or acquaintance of the opposite sex had recently suffered, and cases in which a parent had dreamed during the pregnancy that an opposite-sex family member announced a plan to return as the baby. None of them showed a significant association with the presence of gender nonconformity (Pehlivanova et al., 2018).

We plan to continue conducting such analyses, which provide an important complement to the traditional intensive study of individual cases. They offer the potential not only to evaluate the evidence that the phenomenon provides for a connection between a previous life and a current one but also to consider patterns that may be involved in the processes associated with such a connection.

EVALUATING AND INTERPRETING THE CORT DATA

As Stevenson began publishing finely detailed reports of his cases, his work received some positive reactions in established places. The *American Journal of Psychiatry* reviewed his first book on the phenomenon, *Twenty Cases Suggestive of Reincarnation*, and noted that it included "cases recorded in such full detail as to persuade the open mind that reincarnation is a tenable hypothesis to explain them" (Laidlaw, 1967, p. 128). The *Journal of the American Medical Association* reviewed his next book, *Cases of the Reincarnation Type, Volume I: Ten Cases in India*, and stated, "In regard to reincarnation he has painstakingly and unemotionally collected a detailed series of cases in India, cases in which the evidence is difficult to explain on any other grounds" (King, 1975, p. 978). The *Journal of Nervous and Mental Disease* devoted most of one issue to Stevenson's work. In one commentary, Harold Lief (1977), a noted figure in the field of psychiatry, described Stevenson as "a methodical, careful, even cautious, investigator, whose personality is on the obsessive side" (p. 171).

Stevenson's case reports were met with criticism as well. Wilson (1981) faulted him for working in some places with associates who had strong beliefs in reincarnation, feeling that might have tainted their work. He noted inconsistent tendencies in the cases and also observed a pattern in which many of the children claimed to remember a past life in a higher station, such as a more prosperous family or one from a higher caste. Stevenson

(2001), however, reported that while many of the children in India who described past lives in socioeconomic conditions that were substantially different from their own claimed to have lived in better conditions previously, a third of them described worse conditions in their past life. One example was a girl in India named Swaran Lata, who was born into a middle-class Brahmin family. She was one of the girls mentioned earlier who reported memories of being a sweepress, and she happily cleaned up the feces of younger children. She also resisted going to school, saying, "We are sweepers. Nobody studies in our family, and I never sent my children to school" (Pasricha & Stevenson, 1977, p. 38).

Both Rogo (1985) and Angel (1994) criticized Stevenson's handling of particular cases but reached very different conclusions. Rogo stated that, despite various concerns, Stevenson's best cases tended to hold up well and were compelling. Angel, writing in *Skeptical Inquirer*, focused on one of Stevenson's early cases from *Twenty Cases Suggestive of Reincarnation*, a little boy named Imad Elawar, whose case was complicated by "baffling complexities," as Stevenson himself noted. This atypical case had the advantage of Stevenson's documentation of the child's statements before the previous personality was identified, but it was complicated by Stevenson's conclusion that his statements about an automobile accident referred not to the previous personality, as the boy's parents had thought, but instead to the death of a relative of the identified previous personality. Angel had various criticisms, to which Stevenson (1995) was given only limited space to respond. Angel had written that the verification of many of the facts in the case hinged largely on one witness he felt was unreliable. Stevenson pointed out that although Angel had written that the man was the verifier of twenty-eight items, he failed to state that Stevenson made a second trip to Lebanon in order to interview additional informants, leaving only five of those twenty-eight items dependent on the first informant's testimony. An analysis of Angel's complete critique and Stevenson's full response is available online (Barros, 2004).

Philosopher Paul Edwards (1996) devoted a chapter to Stevenson's work in a book critical of reincarnation. The chapter was marred by Edwards's occasional tendency for name-calling, along with a first page where he managed to misquote one reference and misstate the journal name for another. Despite that, he raised some legitimate concerns about the work. He criticized the dearth of Western cases, a reasonable point at the time but now invalidated by subsequent studies. He also questioned Stevenson's methodology based on criticism from one of Stevenson's former associates. Champe Ransom worked with Stevenson in the 1970s and wrote a critique for him at one point that detailed concerns he had about the research. Ransom gave Edwards a summary of that critique, reviewing what he saw as methodological flaws,

including the use of leading questions during interviews as well as periods of questioning that were too brief and occurred too long after the primary events of the case. He thought that Stevenson didn't show adequate concern about the children's inclinations for storytelling and didn't adequately investigate what the children's playmates knew about the events in question. He also thought Stevenson neglected potential distortions of memory among the witnesses who related the events of the cases.

Almeder (1997) pointed out that none of Stevenson's richer, verified cases included the sorts of methodological problems that Ransom cited. Some of Ransom's concerns have also been specifically addressed by subsequent work. The children's tendency for storytelling (or at least their suggestibility) has been assessed by Haraldsson, who found that the children in these cases from two different cultures did not confabulate more than their peers on a test of suggestibility (Haraldsson, 1997, 2003; Haraldsson, Fowler, & Periyannanpillai, 2000).

More critically, as more cases have been studied that include documentation made before the previous personality was identified, concerns about poor questioning by investigators, storytelling tendencies by children, or faulty memories of witnesses become irrelevant. Thirty-three such cases had been studied by 2005 (Keil & Tucker, 2005) and more since. They demonstrate that children's claims about a life in the past can be recorded and then verified to be accurate.

Possible Explanations for the Cases

Any effort to explain this phenomenon must take into account the different lines of evidence in the cases: the knowledge about the past life the children show, the ability of some of them to recognize people or places from that life, the birthmarks and birth defects in some cases, and the behavioral and emotional aspects many of the children demonstrate. As the mixed reactions to this work indicate, such efforts fall into two groups: those that reject the validity of the cases and those that accept them as valid. Attempts to explain this evidence away in conventional terms have typically invoked methodological issues of the sorts above to suggest the cases may be produced by fraud, fantasy, acquisition of information through normal means, faulty memory by informants, or some combination thereof.

Regarding fraud, cases that were determined to be hoaxes have occurred on rare occasions (Stevenson, Pasricha, & Samararatne, 1988). But there is no evidence—or reason to think—that fraud is involved in significant numbers. The families typically have little or no motivation for inventing the stories, as the vast majority have no hope of gaining any benefit from them, material or

otherwise. Although occasional American families seem to enjoy the prospect of publicity about their cases, most of them insist on absolute confidentiality. As a practical matter, a lot of the cases involve multiple witnesses who would have to be part of a conspiracy, and many also include information from the child that the families would have no way of knowing.

Another possibility to consider is that the children are merely fantasizing about another life. In cases in which the information provided by the child is unverified—that is, when no previous personality has been identified whose life matches the child's statements—there is indeed little evidence to ensure that the children's claims are not fantasy. This explanation, however, clearly fails for the hundreds of cases in which the child's statements are in fact verified. For those, coincidence would need to be added, the idea being that the child's fantasies just happened to match the life of a previous personality by chance. Precise odds for this cannot typically be quantified for a case, but in the most detailed cases the specificity of the statements, along with the large number of them, argue strongly against such an explanation.

A third possibility to consider is that a child who gives accurate details about a previous life gained knowledge about that life through ordinary means, such as overhearing people talk about it. When the previous personality is a deceased family member or part of the local community, this possibility warrants serious consideration. In such cases, the families at times feel their children provided details about events from the life that they could not have learned about through normal means, but there is usually no way to exclude the possibility. For cases involving a previous personality unknown to the family who lived and died some distance from them, however, such an explanation is clearly not sufficient.

An explanation that requires more serious consideration is the possibility that the children did not demonstrate as much knowledge about the previous life as their parents later recall they did. Stevenson (2001, p. 154) wrote that if he were going to coach a critic of these cases, he would advise concentrating on evidence of the unreliability of the informants' memories. Clearly, this explanation wouldn't cover the birthmarks and birth defects, which are still there to be seen, but it could be used to challenge any statements the child made about the previous life that were not documented before the previous personality was identified.

In this scenario, children, particularly those from cultures with a belief in reincarnation where they are encouraged by their parents, fantasize about a past life. The parents then find a family with a deceased member of the same general description. The two families exchange information and, following that, come to believe the children had previously expressed more accurate and more specific details about the past life than they in fact did (Brody, 1979).

Two studies have critically explored this possibility. Stevenson and Keil (2000) compared the claims that parents made about the children's memories at two points in time. Keil reinvestigated fifteen cases Stevenson had studied some twenty years earlier to see whether the reports by the families had become exaggerated over time. Keil did so without knowing what the parents originally told Stevenson. He and Stevenson then compared the information that each of them had obtained. They found that only one case appeared stronger in the second investigation. In three of them, the reported statements had a similar strength level, with some variation in details. In the other eleven, the reports had become weaker, often because the parents recalled fewer of the details that the children had given. Thus, the study provided no evidence showing that the cases grow stronger in people's minds over time; in fact, they had often become weaker.

In the other study, Schouten and Stevenson (1998) compared two sets of cases: ones in which written records had been made of the children's statements before the two families met and ones that did not include such records. If families later exaggerate what the children have said, then the cases with written records documenting what they said would be expected to have fewer statements and fewer correct ones. Instead, what Schouten and Stevenson found was that the cases with written records included more statements, with the percentage of correct statements being the same in both groups.

Thus, both studies undermine the idea that without documentation of what the child said, the families credit them with knowledge they didn't actually possess. In fact, without the documentation, they credit the children with *less* knowledge than they actually demonstrated, presumably because the families forget some of the children's statements since no one wrote them down. This is not to deny that some families in individual cases may misremember the children's statements and recall them as being more impressive than they really were, but we have no reason to believe this is the general pattern. Moreover, and most important, the dozens of cases now studied in which the children's statements about the previous life were in fact documented before the search for the previous personality was undertaken cannot be explained this way. Their existence strengthens the argument for an ability in some young children to evince memories of a life in the past, thus providing support for the legitimacy of the cases that do not have such documentation.

In sum, we see that none of the conventional interpretations can adequately explain large numbers of the cases. This leaves the would-be debunker to assert an amalgamation made up of different explanations for the various aspects of the cases: perhaps that birthmark was a coincidence, perhaps this parent misremembered this statement, perhaps that documented statement

was a lucky accident, and so forth. The result ultimately becomes quite unsatisfactory. This then leads us to consider ways to explain how children can, at the very least, know about events from the past and, from their perspective, remember events from a life they themselves experienced in the past when they were a different person.

Before considering possible explanations for the evidence as a whole, the aspect of birthmarks and birth defects merits specific attention. If we accept that the cases involve a nonphysical connection to a past life, we need to consider how the connection would lead to birthmarks and birth defects. One approach is to see them as examples of a psychosomatic phenomenon involving mind and body interaction.

It is clear that mental factors can produce numerous changes in the body (Kelly, 2007; Sternberg, 2000). In addition to general effects, the evidence indicates that distinct mental images or suggestion can sometimes produce very specific changes (Kelly, 2007; Stevenson, 1997a). Examples include cases of stigmata, skin wounds that some individuals, usually devout ones, have developed that matched the crucifixion wounds of Jesus described in biblical accounts. The skin wounds have often occurred after the person engaged in an intense religious practice, and more than 350 cases have been reported (Stevenson, 1997a). Other examples of specific psychosomatic effects can occur when susceptible individuals undergo hypnosis. Hypnotists have produced blisters on participants in a number of cases by telling them they were being burned as they were touched with some cool object, such as the tip of a finger. In some cases, the hypnotists touched participants with an object in the shape of a letter or symbol, producing wounds in that shape. In other cases, individuals developed skin changes after reliving traumatic experiences, often with the help of either hypnosis or drugs. After one man reexperienced an event in which his arms were tied behind his back, he developed deep indentations on his forearms that looked like rope marks (Moody, 1946).

Evidence therefore exists demonstrating that mental factors, including memories, can produce specific changes in the body. If the straightforward reincarnation view is correct and the consciousness of a previous personality—which includes in these cases the traumatic memories of a violent death—can carry over to a new life, it would follow that mental factors might produce changes in the developing fetus just as they can produce changes during a life, leading to birthmarks and birth defects that mimic the wounds suffered during the death. In this situation, it would be the awareness of the injury rather than the wound on the body per se that caused the defect. That awareness might not occur until after death in the sudden death cases, which would be consistent with the idea of a continuing consciousness that has an ability to have new experiences and process them.

Alternative interpretations are possible, however. For example, Roll (1998) agreed that the children's memories, birthmarks, and birth defects often match the previous personality too well to be accounted for by mere chance but postulated that the birthmarks and birth defects could be caused by a psi process involving only living persons rather than a surviving previous personality. This would be through a mechanism of telepathically derived maternal impressions.

"Maternal impressions" refers to the idea that a stimulus during and perhaps even before pregnancy—a stimulus that had a significant psychological impact on the future mother, such as the sight of a deformed individual—could cause a corresponding birthmark or birth defect on the child (Stevenson, 1992). It largely faded in the late nineteenth and early twentieth centuries since such a process conflicted with accepted scientific concepts. Telepathic impressions involve changes in one person induced by someone typically at a distance (Stevenson, 1970). Along with the thoughts usually involved in telepathy reports, impressions or feelings, it is believed, can be transferred as well, so, for example, someone might experience physical symptoms that match those of a loved one experiencing some medical event at the same moment.

Roll suggested that cases of maternal impressions—transfers of a mother's mental images to her fetus—are similar to ones of telepathic impressions, except for the much smaller spatial distance between the two individuals. This raised the question of whether extrasensory perception is the source of maternal impressions. If so, the mother need not have seen the critical image of the defect herself. It could become lodged in her mind after someone she was emotionally connected to saw it. Alternatively, Roll said, this other person could affect the developing fetus directly rather than through the mother, again by telepathy.

Stevenson (1999a) responded that the cases involve much more than just the transfer of information, whether cognitive in the form of memories or more purely biological in the form of birthmarks or defects. Along with those, most of the children manifest attitudes and purposes of the previous personality. Stevenson cited the example of Chanai, described earlier, who showed proprietary attitudes toward the previous personality's possessions and who expected members of the man's family, especially his children, to treat him with respect as an adult and father. Stevenson argued that many of the cases show evidence of continued purpose, suggesting survival rather than paranormal communications.

Looking at the overall phenomenon, if the strongest cases are valid (as they appear to be), they would seem to require a nonphysicalist explanation. If one accepts the cases but tries to argue from a physicalist side that memories are encoded in some sort of material carrier that leaves the dying body

and exerts an influence on the biological and psychological development of a subsequent life, the scenario quickly conflicts with current physicalist understandings. What material process could conceivably include disembodied memories that continue to exist for decades before reemerging in a child born hundreds of miles away?

The nonphysicalist alternatives are psi-based interpretations that can be broken down into two competing types, as they are with other similar phenomena: living-agent psi (LAP), on the one hand, versus survival of bodily death, on the other. Two authors who have explored the LAP hypothesis extensively are Griffin (1997) and Braude (2003). Griffin stated that it was hard to deny that some form of paranormal explanation is needed for the cases, and he approached them from the perspective of Alfred North Whitehead's process philosophy. He considered an LAP interpretation he called "retroprehensive inclusion," a term that indicates prehending (or taking in) the experiences of someone's life in the past. His exploration was detailed and complex and bears consideration, but, in brief, one summarizing point he made was that since all of the good evidence for reincarnation involved souls whose bodies had died, this strongly suggested that bodily death causes a change that makes reincarnation possible. In his view, this supported a theory of literal reincarnation, in which a soul continues to have experiences after separating from a body, over any LAP theory, including retroprehensive inclusion.

Likewise, Braude concluded in his thoughtful analysis that the best reincarnation cases raise a major problem for the LAP hypothesis. He said that explaining them with LAP might require either implausibly successful psychic links between a child and multiple sources of information or even more implausible psi on the part of the parents, which would involve not only information gathering but also telepathic influence over the child.

Keil (2010) argued that most (perhaps all) cases can be fitted into a framework of psi rather than reincarnation or survival. He presented the example of an unpublished case he investigated in Turkey. A boy gave few details about his past life except for his previous name, which matched that of a nine-year-old boy who had died in another village seven miles away. When he was taken to the home of the previous boy, he failed to recognize anyone or to answer any questions about his life, leading the boy's relatives to reject him as the rebirth of their deceased family member. He also said, however, that he remembered where he had collected water from a well and carried it to his house some distance away. The well was no longer in use and the path to it no longer visible, and yet the boy found it with little hesitation or help.

Keil (2010) used this case to ask whether some of the children have paranormal information but are not rebirth cases. He proposed a framework of "pre-personality psychic absorption from a past life" (p. 84), meaning that at

a very young age, before developing a personality structure with boundaries, a child absorbs information that persisted from a past life. He suggested that “thought pools” or “thought bundles” might persist for some time after a person dies. He viewed the enduring entity as not just a fixed printout, but rather a container with information that can respond in various ways depending on how the child connects with it. He thought it would not have awareness of its surroundings or the ability to generate new thoughts, so it would be viewed as persistence rather than survival. That persistence might include getting attached to objects, localities, people, or situations, leading eventually to a connection with the child.

Nahm and Hassler (2011) responded and, building on the work of Griffin, Braude, and others, raised a number of objections. Among them, they considered the establishment of the link between the thought bundles and the child. They asked who would select the link—who is active and who is passive—and how the children would develop such strong identifications with the thought bundles. They also wondered why, in a cohort of forty-two cases involving twin pairs, there was not a single case in which both twins absorbed the same thought bundles and recalled the same life (Stevenson, 1997a). In addition, they discussed the issue of memories from the intermission period between lives, pointing out that there have been numerous reports of apparently veridical perceptions, and wondered how those perceptions could be attached to the thought bundles of a dying person.

Stevenson (2001) also considered the possibility of psi-based explanations not involving survival. He pointed out that children in the cases rarely show any extrasensory perception abilities apart from their past-life memories.³ He also noted the behavioral features of the cases and the strong emotion the children can show in response to stimuli related to the previous life, such as tears after receiving bad news about previous family members or, in one case, clapping with joy on learning that the previous personality’s killers had been hanged. He argued that some of the children showed a syndrome of behaviors that essentially amounted to a facsimile of the previous personality and stated we have no grounds to think a process of paranormal cognition could produce that.

He also pointed out the issue of birthmarks and birth defects. He acknowledged that advocates of a psi explanation might cobble together the concepts of extrasensory perception and maternal impressions to produce an interpretation that does not require survival. But as in his reply to Roll, he noted such an interpretation would have difficulty explaining the intense identification of the child with the previous personality: the mother would have to acquire information about the previous personality by telepathy and then impose on

her child not just the physical marks but also the memories and behaviors the child demonstrates. In his view, such a scenario was not believable.

In the same discussion, Stevenson, though acknowledging flaws in the cases, said he thought reincarnation was the best interpretation for some of them. These included in particular ones in which the two families involved were previously unknown to each other and for which a written record was made of the child's statements before they were verified, two cases of monozygotic twins in which the twins had divergent memories of previous lives and showed behaviors consistent with these memories (Stevenson, 1999b), and cases in which a medical record showed a close correspondence between a child's birthmarks or birth defects and wounds on the body of the previous personality.

That seems to be a fair summation of where the work stands. Regardless of whether we use the term "reincarnation," "survival after bodily death" fits the evidence better than the alternative explanations. Although many of the weaker cases can be plausibly ascribed to conventional processes, the group of strongest cases cannot be. And attempts to explain them with psi-based interpretations other than survival appear to be inadequate. The findings from the CORT work combine with those in a number of other areas, as outlined in *Irreducible Mind* (Kelly et al., 2007), to demonstrate the need for a post-physicalist conceptual framework that can incorporate the results into a larger understanding of reality. Steps in that direction are included in *Beyond Physicalism* (Kelly, Crabtree, & Marshall, 2015) and the following parts of this volume. Such a framework should at least allow for some type of continuation of experience after bodily death, one in which memories and emotions from a life that has ended become associated with a subsequent life. These memories and emotions exist along with the apparent ability to encode observations or experiences during the interval between the two lives and the continued ability to recognize people and places from the prior life. Such a continuation clearly challenges us to reach toward new understandings.

NOTES

1. He also published a shorter synopsis of the two-volume set (Stevenson, 1997b).
2. James said that when he first found his parents, they were eating dinner on the beach at a large pink hotel in Hawaii, something they in fact had done during their first week of trying to get pregnant. James was conceived a couple of months later. Ryan gave details about the day his mother learned the sex of her baby, accurately describing how much she cried since she very much wanted a girl.
3. There are exceptions, however, including Ryan's case.

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3

PRECOGNITION

Bob Rosenberg

Surely, therefore, ignorance of future evils is more advantageous than knowledge of them.

—Cicero, *De Divinatione*¹

The only thing that makes life possible is permanent, intolerable uncertainty: not knowing what comes next.

—Ursula Le Guin, *The Left Hand of Darkness*²

It is quite fortunate . . . that we can know nothing of the future. Because, truly, not knowing the future is one of the reasons for living.

—Charles Richet, *L'avenir et la prémonition*³

I never said it was possible, I only said it was true.

—William Crookes, *Researches in the Phenomena of Spiritualism*⁴

The problems of precognition are restricted largely to a simple set of topics:⁵ time, causality, and free will. Each of these subjects has a rich history of philosophical argument stretching back millennia; not surprisingly, those arguments have almost never mentioned, much less accounted for, precognition. Nevertheless, the past century and a half has provided a rich collection of varied evidence that has laid an empirical foundation for thinking about this thorny triad, and as a result, a number of thinkers have seriously approached them with precognition in mind.

In order to move ahead with a serious discussion about precognition, we are accepting its reality. The evidence for its existence is overwhelming. The

case for precognition has been carefully and convincingly made several times at this point, partly through reviews of collected cases and partly from the experimental work of the past half century (e.g., Barušs & Mossbridge, 2017; Dunne & Jahn, 2003; Jahn & Dunne, 1987; Mossbridge & Radin, 2018b; Radin, 2006a, 2016; Rosenberg, 2016; Roy, 1990; Targ, 2012; Targ, Katra, Brown, & Wiegand, 1995; Wargo, 2018).

Precognition, or prophecy, has a history as ancient as humanity's written record. But when the systematic study of psychical phenomena began in the last quarter of the nineteenth century, the British researchers at the heart of the Society for Psychical Research were reluctant to admit it to the catalog of common things.⁶ Eleanor Sidgwick (1889), perhaps the most critical intellect among the founders, felt that precognition involved "new and vast difficulties peculiar to itself" that made it far more difficult to accept than telepathy or clairvoyance (p. 289). In the next decade, Frederic Myers (1895a, 1895b) presented a reasonable case for both retro- and precognition, but he found no way, in thinking about precognition, around the "iron collision between Free Will, and 'Fixed Fate, Fore-knowledge absolute,' from which no sparks of light have ever yet been struck" (1895a, p. 337).⁷

Several researchers collected cases as the twentieth century wore on, and the evidence for spontaneous precognition quietly piled up (Rosenberg, 2016).⁸ The British aeronautical engineer J. W. Dunne (2001), in *An Experiment With Time* (originally published in 1927), detailed his own precognitive dreams. The book drew wide attention in scientific and literary circles, but it was swimming against a tide of behaviorism and materialism, and its impact faded despite an attempted replication a few years later (Besterman, 1933).

Moreover, with the systematic laboratory work begun by J. B. Rhine in the late 1920s, attention turned largely away from spontaneous cases as scientific evidence.⁹ Unfortunately, whatever "proof" regarding precognition came out of the laboratory, it was stripped of the human context, rich detail, and psychological information that makes spontaneous cases so compelling for both the investigators and the people who experience them.¹⁰ And although it seemed easy to set up a laboratory experiment in which a subject attempted to foresee a forced-choice target¹¹ or list of targets before the target was ever generated, in fact it turned out to be anything but easy to ensure that precognition was behind the results. In 1982, when a leading parapsychologist wrote an article about the laboratory work, he titled it "Assessing experimental support for true precognition" (Morris, 1982). Morris used "true" in the context of the laboratory experiments, where some mix of psychokinesis, telepathy, and clairvoyance might have masqueraded as statistically observed manifestations of precognition (Honorton & Ferrari, 1989, p. 283).¹²

There is no such ambiguity, however, in a report such as this one:

I was going to spend the day with my sister at Roehampton, and the night previous, just as I was going to sleep, I was startled by a vision before me of the carriage, which was to meet me at Mortlake Station, being upset in the road close by her house. This quite woke me up, and I tried to forget it, but on going off to sleep again the same vision returned, exactly as at the first, and I then began to feel very nervous about my visit of the next day; but eventually I went to sleep, and it did not come back to my mind. When I woke in the morning it was as a dream, quite gone.

I went by train to Mortlake, and had to wait at the station for a few minutes. Then the groom drove up quickly with a pony carriage, and apologised for the carriage not being there, but the order had not been given in time to get it ready.

Everything went on smoothly till we were driving up the lane to my sister's house, when the horse became very restive, the groom got down, but could find nothing wrong, so we went on; this happened a second and a third time, but when he was examining the horse for the third time my vision of the night before suddenly came back to me, and I told the groom I would get out and walk to the house; he tried to dissuade me, but I felt nervous and insisted upon walking, so he drove off by himself, and had only got a very short distance from me when the horse became quite unmanageable. I hurried on some men in the road to help him, but before they reached him the carriage, horse and groom were all in a confused broken heap in the hedge, just as I had seen it the night before, though not exactly in the same spot. The groom managed to extricate himself, but when I got up to him he said he was so thankful I insisted upon getting out, for he could not possibly have saved me from a dreadful accident.

I had no fear of horses. I should certainly not have left the carriage but for the forewarning of the previous night. (Sidgwick, 1889, pp. 313–314)

Or this one, challenging no matter how it is interpreted:

Over 20 years ago I was working as an investigator for an investment insurance company. As our company insured cars and trucks I made enemies in the underworld. In consequence I usually had a good firearm within reach. One morning I was awakened at 4:00 A.M. by a policeman who was a close personal friend. The guy looked like he had seen a ghost. He asked me to loan him my pet pistol, a 44 calibre Smith & Wesson special. He handed me his own gun, a 38 Colt police, saying, "For God's sake don't carry this gun. I can't tell you why. You would think I am crazy."

About 10:00 A.M. that same morning I received a call to the Memorial Hospital. My policeman friend had stumbled into a hold up. He had killed two hoodlums and wounded a third with five shots from my 44 before suffering a minor chest wound himself.

He asked me to take his 38 to a pistol range and fire it. I did. It fired two shots. On the third the main spring let go, rendering the gun useless. I went back and told my friend. "I thought so," he said. "I dreamed I was in a gun fight and the gun failed on the third shot. That dream was so real that I just knew I had to have a good gun before I went on duty. I was even scared to drive to your place, two and one-half blocks with that Colt." Modern guns of the superb quality of Colts, and Smith & Wesson seldom fail. Just why this cop had the nightmare, I don't know. All I know is that he was as anxious to obtain my 44 as a drowning man is to grab a life-preserver, and that in my hands his gun fired only two shots. (Rhine, 1955, pp. 20–21)

Louisa Rhine, who collected this and many other reports, thought that perhaps the policeman clairvoyantly saw the flaw in the spring and extrapolated the rest. That theory seems like a reach, but when you are intimately familiar with a piece of equipment—particularly one on which your life depends—perhaps it is not so far-fetched. Or did he precognize his gun failing after two shots at the pistol range and combine that with the actual gunfight? Or did he actually see a possible future in which his gun failed in a gunfight?

Spontaneous precognitions have been reported for millennia. Laboratory experiments of the previous century, in the attempt to force spontaneous experiences through a reductionistic sieve, left behind their humanity. Fortunately, the laboratory study of psi was becoming more creative. In 1959, Gardner Murphy addressed a conference, "The Study of Precognition: Evidence and Methods" (Murphy, 1961). He urged researchers to consider "a number of dimensions having to do with the general process of perception, the process of memory, conceptual thinking, imagination, broad problems of motivation and impulse, impulse control. . . . I think that these dimensions have not yet been very adequately represented" (p. 6). He sketched a theoretical context for precognition, "a model only of psychological predetermining factors, not of clock time or of physical time. This . . . would include motivating factors, would include cognitive structure, would include interpersonal relations" (p. 15). Murphy was urging a broad experimental view that would finally surface at the end of the century in remote viewing work (see below).¹³

In the late 1980s, Charles Honorton and Diane Ferrari performed a meta-analysis of a half century of forced-choice laboratory precognition experiments, demonstrating their evidentiary strength (Honorton & Ferrari, 1989). They concluded that "analyses of parapsychological alternatives to precognition . . . provide no support for the hypothesis that the effect results from the operation of contemporaneous ESP and PK at the time of randomization" (pp. 300–301).¹⁴ They also felt that "the stability of precognition study outcomes over a 50-year period, which we described earlier, is . . . bad news. It shows that investigators in this area have yet to develop sufficient understanding

of the conditions underlying the occurrence (or detection) of these effects to reliably increase their magnitude” (p. 294). At the same time, building on the careful dream telepathy studies done at the Maimonides Medical Center in Brooklyn, New York, Honorton developed the Ganzfeld technique.¹⁵ Most important for future work in precognition (and psi in general), Honorton and others were using free-form visual targets in conjunction with altered states, both of which turned out to be conducive to psi, and developing systems for grading the accuracy of responses to those targets.

During that same period, Russell Targ and Hal Puthoff, two physicists at the Stanford Research Institute (SRI) in California, were developing a related type of research. With funding from various sources in the American intelligence and defense communities, who were spurred by the possibility of using “psychic powers” to spy on America’s enemies, the SRI team, drawing on the remarkable abilities of several gifted sensitives, developed a protocol for what they called remote viewing, an experimental method that lies psychologically between other laboratory work and spontaneous precognition. One extremely significant aspect of the remote viewing work is that it moved the locus of precognitive work from dreams, with all their attendant difficulties (as discussed in Barker, 1967), to a waking state.

The ability of these sensitives to locate and describe targets in the past, present, and future, with or without the assistance of an agent actually visiting the location to be described, was extraordinary enough to be occasionally frightening. In one instance, two of the psychics in California were given geographical coordinates that, unbeknownst to them, located a vacation cabin in Virginia. What they actually described turned out to be a secret American underground intelligence facility about a quarter of a mile away. Not only did they describe the physical layout of the facility, but one of them also read names from the file drawers lining one of the rooms, which included a number of secret code words (Targ, 2012, pp. 23–25, 49–50).

At Princeton University in New Jersey, a group led by engineering dean Robert Jahn (Princeton Engineering Anomalies Research [PEAR]) picked up the remote viewing work and confirmed its efficacy (Dunne & Jahn, 2003, p. 209). They reported that

since more than visual imagery seems operative in any of these protocols, we prefer the more generic title Remote Perception to the original Remote Viewing designation; and since most of our data are obtained in the precognitive format, our acronym for this portion of the program is PRP—Precognitive Remote Perception. (Jahn & Dunne, 1987, p. 160)

They also found, after two and a half decades and 653 trials, that their cumulative results yielded a probability of about 3 in 100 million (Dunne &

Jahn, 2003, p. 207). There were many earlier spontaneous cases (e.g., Myers, 1895a, pp. 379–389; Osty, 1923, pp. 104–109) that sound like remote viewing, without the formal protocols that SRI and PEAR developed. Stephen Braude (2011) observed that “some ganzfeld and remote viewing hits . . . are so spot-on or so reliable that it’s simply absurd to attribute the successes to chance” (p. 5).¹⁶ In other words, precognition research has reached the stage where experiments don’t need to prove that the phenomena are real. They can probe the how and wherefore.

Another branch of recent experimental research has also yielded remarkable results. In the 1990s, Dean Radin inaugurated a series of presentiment¹⁷ experiments, laboratory work in which subjects view varied, emotionally loaded images—peaceful, neutral, erotic, violent—on computer screens and their psychophysiological *anticipations* are measured before the images appear (actually, before they are selected!). The effects, which generally appear a few seconds before the stimulus, are not large, but they are consistent and replicable. A meta-analysis (Mossbridge, Tressoldi, & Utts, 2012) of some three dozen studies that used photographs, flashes of light, loud sounds, and other potentially evocative events revealed staggering confirmation, leaving no doubt of the reality of the phenomenon (see also Bem, Tressoldi, Rabeyron, & Duggan, 2016; Mossbridge & Radin, 2018a).

Although presentiment experiments do not carry the gut-level psychological impact of, say, viewing a secret National Security Agency facility located by latitude and longitude, their announcement to the world was a boulder dropped into the limpid metaphysical pool of modern materialist science. Daryl Bem (2011), an internationally renowned social psychologist, published a paper in the respected *Journal of Personality and Social Psychology* extending Radin’s work. The *New York Times* noted the scheduled publication of the article, and publicly visible intellectuals of all stripes, from cognitive scientist Douglas Hofstadter to astrophysicist David Helfland, declared Bem’s work the “end of science” (Braude, 2011; Cardeña, 2015; Dossey, 2011; Mossbridge & Radin, 2018a; Mossbridge et al., 2014). Sadly, it was more true that “the often shrill and ill-informed criticisms of the study reflect[ed] stupidity, conceptual panic, dishonesty, or intellectual cowardice within the scientific establishment” (Braude, 2011, p. 1).

The paper was published. Science did not end. However, psi research wasn’t suddenly institutionalized in university departments and laboratories, either.

THEORIES

The greatest obstacles to precognition are not evidential—they are conceptual.¹⁸ How are we to understand the perception of something that has yet to

happen? How are we to reconcile the possibility of perceiving that something and yet having the free will to change it? How are we to reconcile the logic of changing that something and thereby eliminating the very thing perceived? Why does precognition happen at some times to some people and not at other times or to other people? Why does it sometimes involve burning houses or disasters and other times trivial or seemingly meaningless episodes? These quandaries have befuddled thinking about precognition for thousands of years. (Of course, the human race used fire for hundreds of thousands of years without understanding combustion—but we did slowly better understand how to create and use it.)

Any theory must cover not just the laboratory work but also the spontaneous cases, many of which contain puzzles not to be found in the laboratory. We have strong cases in which the perceived future is apparently averted (Rhine, 1955; 1961, pp. 175–189).¹⁹ This one, first used by Myers (1895b), was subsequently pointed to by others to illustrate the possibility of intervention as a result of precognition:

On the second occasion my warning in dream did probably prevent a rather serious accident. We were living in about 188—, in Hertford-street, Mayfair. One day I determined that on the morrow I would drive to Woolwich in our brougham, taking my little child and nurse, to spend the day with a relation. During the night I had a painfully clear dream in vision of the brougham turning up one of the streets north of Piccadilly; and then of myself standing on the pavement [*sic*] and holding my child, our old coachman falling on his head on the road,—his hat smashed in. This so much discomposed me that when in the morning I sent for the coachman to give him his orders, I almost hoped that some obstacle to the drive might arise, so that I might have an excuse for going by train. The coachman was an old and valued servant. I asked him if he would have the carriage ready to drive to Woolwich at ten. He was not given to making difficulties; but he hesitated, and when I suggested eleven instead, he said that he would prefer that hour. He gave no reason for his hesitation and said that the horse was quite well. I told him almost eagerly that I could quite well go by train; but he said that all was right.

We went to Woolwich and spent the day. All went well until we reached Piccadilly on the return journey. Then I saw that other coachmen were looking at us; and looking through the glass front of the brougham I saw that the coachman was leaning back in his seat, as though the horse were pulling violently, of which, however, I felt no sign. We turned up Down-street. He retained his attitude. My dream flashed back upon me. I called to him to stop, jumped out, caught hold of my child, and called to a policeman to catch the coachman. Just as he did so the coachman swayed and fell off the box. If I had been in the least less prompt, he would have fallen just as I saw him in my dream. I found afterwards that the poor man had been suffering from a serious attack of diarrhoea on the previous day, and had gradually fainted from exhaustion during the drive

home. He was absolutely sober; and his only mistake had been in thinking that he was strong enough to undertake the long drive. In this case my premonitory dream differed from the reality in two points. In my dream we approached Down-street from the west; in reality we came from the east. In my dream the coachman actually fell on his head; the crushing of his hat on the road being the most vivid point of the dream. In reality this was just averted by the prompt action which my anxious memory of the dream inspired. (p. 497)

There are at least two ways to think about such a situation. On the one hand, we can say that the percipient saw a probable future, one that was averted by her action, as a result of which the world took a different path. But another way to look at it is that the percipient subliminally apprehended the coachman beginning to fall and completed the image with the perfectly reasonable expectation that he would fall all the way to the street. It is significant in this regard that the coach was going the wrong way on the street, just as the carriage taking the woman to her sister's house was not upset in the location foreseen the night before. If we are going to have our lady's intervention with the coachman's fall take us down a different possible future in which everything up to the intervention was as foreseen, where does the wrong direction of travel on the street enter the picture? That happened before any intervention on her part. Do we need the different future to begin with the coachman's decision to take a different route, one that led to the coach turning onto the street in the direction it did? The idea of a partially constructed precognition seems to fit better: our lady perceived the fall but supplied both the direction of travel and the conclusion. It is in fact extremely difficult to find a spontaneous case that cannot be explained by a subliminal prevision, augmented as it is brought to conscious awareness by the fears or expectations of the percipient. Both G. M. N. Tyrrell (1953, pp. 101–102) and Louisa Rhine (1955, p. 30) discussed the construction of psi impressions from subliminal veridical information and the psyche of the perceiver. In nearly every case of apparent intervention, it is not hard to construe the averted part of the vision as having been supplied by the perceiver.

There seems often to be an unspoken, unreasonable burden on precognition in that it is expected to be filmlike in its literal representation of the future. If that expectation is removed and precognitions are, like apparitions or other telepathic impressions, acknowledged to be partially accurate and partially constructed by the percipient, much of the concern about possible or averted futures evaporates.

But then we have a few previsions that leave little room for interpretation and that do seem very filmlike:

While still living in Brunswick Square I had a strange experience. I slept in a very small bedroom, if I stretched out my arm in bed I could just touch a chest

of drawers. I woke one morning, lying facing this chest of drawers. I was wide awake: suddenly the room changed: I was facing a large fireplace in front of which stood two men, both dark. They kept turning in my direction and I noticed what beautiful teeth one of them had. They were talking but I could hear no sounds. Then a fair man, whose face I could not see, walked across between them and me. I was so anxious to see him that I jumped out of bed, knocked my head on the chest of drawers and everything disappeared. I told everyone at breakfast, and my family when I went home. Years after I went back to the station in Central India where I had lived as a child. The evening after I arrived I went to the Club. As I went in, the same two dark men were standing at the same fireplace just in the same positions—then the fair man walked across. I started forward to see him and knocked into a man who laughingly asked why I was so eager! I found out afterwards that the two men had been boys at Eton at the time of my vision and the Club house not built. It was all absolutely unimportant which makes it all the more strange that it should have occurred. I wrote home at once and told my family. (Lyttleton, 1937, pp. 121–122)

This episode (which I will refer to as the “bright smile”) is evidentially rich for several reasons. First, it is finely, accurately detailed—what Herbert Saltmarsh called “a rent in the veil,” as opposed to a vague premonition or half-correct dream.²⁰ Second, it is a prevision of an event years in the future. And, third, as the percipient so observantly said, it is “all absolutely unimportant which makes it all the more strange that it should have occurred.” The utter triviality of so many recorded precognitions is confounding²¹ if we would like previsions to be of significant events—something significant enough to be worth the trouble to precognize, significant enough to cast its shadow before. (Saying it is significant because it was precognized simply begs the question.)

There have been a few serious, specific attempts at a theory of precognition. Most have drawn on physics to describe time in a way that afforded a perspective on the future.²² J. W. Dunne (2001), in his *Experiment With Time*, developed a model that allowed a view of time from an added (fifth) dimension, but that addition led to an infinite regress, as C. D. Broad (1953) pointed out. Despite any failings, though, it was a thoughtful attempt and attracted attention across Western culture, from novelists and playwrights to philosophers. Broad (1953), in rejecting Dunne’s idea, proposed multidimensional models, and since then there have been a number of others that cosmologist Bernard Carr (2015a, 2015b) surveys in developing his hyperspatial theory. An advantage of extra dimensions is that events separated by space or time in our normal three-dimensional world can be contiguous in the higher ones, just as two-dimensional paper can be folded through the third. The question for all these models, no matter how internally consistent, is how they connect multidimensional location in space and time to human perception or consciousness.

Physicist Ed May, who took over the remote viewing work of Targ and Puthoff in the 1980s, worked with psychologist Sonali Marwaha to develop a theory they called the multiphasic model of precognition. They argue for a fundamentally mechanistic model that has two parts: one physical that covers the acquisition of information and one neurobiological that covers the bringing of that information to conscious awareness. “Right from its inception,” they write, “the SRI-SAIC program has taken a physicalist position.” They deliberately declare that “there is absolutely *no* mention of terms such as consciousness (except stray references to consciousness as a general term), non-local consciousness, spirituality, dualism, or religion in the SRI-SAIC reports” (Marwaha & May, 2019, pp. 2–3; see also, e.g., May & Marwaha, 2015, Vol. 2, Chapters 1, 6, 7, 10, 15).

In the early twentieth century, quantum mechanics both dematerialized the physical world and (in some interpretations) required an observer—consciousness in some form. Those developments have been very attractive to parapsychology, and for half a century theorists have been trying to understand how they might connect (e.g., LeShan, 1974; Oteri, 1975; Radin, 2006a; Stapp, 2007, 2015). There have been countless attempts to square precognition with the more abstruse, time-bending habits of quanta and cosmos, a recent example being Sheehan (2015) or even Radin (2015, p. 322).²³ But it is one thing for physics to admit a need for mind and quite another for it to *explain* mind. Modern science/physics from its inception deliberately excluded mind as an object of study—and has sometimes even denied its existence. Marshall (2005) said, “Physics was the route by which mind was excluded from conceptions of the world at large, and physics may be the route by which mind finds its way back in” (p. 278). But only the most remarkable serendipity could lead such a restrictive system to provide deep insight into that aspect of the world it originally abandoned. It seems clear that any physicalist interpretation of precognition is bound to be incomplete at best. The two previous books in this series, *Irreducible Mind* and *Beyond Physicalism*, have made that point repeatedly about consciousness in general.

Another aspect of Marwaha and May’s (2016) theorizing is the notion that all psi phenomena can be reduced to precognition, an assertion I find contradicted by the evidence. The psi literature shows that the labels we use—telepathy, clairvoyance, precognition, and even psychokinesis, cases of the reincarnation type (CORT), and survival research—are perhaps convenient but not, finally, limiting. They shade one into the other; there are no firm boundaries any more than there are between colors in a rainbow (which is why not all the cases I cite are necessarily strictly precognitive). Still, red is not green; differences in degree become differences in kind, and clairvoyance and precognition, for example, are sometimes easily distinguished, even if related.

Russell Targ, who with Hal Puthoff initiated the modern remote viewing work at SRI, came to a different conclusion about consciousness that he lays out in his *Reality of ESP* (2012). Adopting physicist David Bohm's holographic metaphysics of an implicate/explicate order, he argues that he "considers physics to be comprehensive enough to embrace consciousness" (p. 207)—but not using ordinary physical interpretations of space and time.

Eric Wargo's *Time Loops* (2018) is in many respects an interesting, useful exploration of precognition. He carefully and thoroughly dismantles many of the arguments used against it. Unfortunately, his theoretical approach relies fundamentally on promissory materialism—"we can expect a physical, material explanation in years or decades to come" (p. 36)—which I believe scratches it from the race. Despite that, he develops a couple of perspectives that illuminate some cases. The first is the idea that precognition involves awareness of a future state of the percipient's own mind. There are many strongly supportive cases—they could hardly be explained otherwise—like a famous one of J. W. Dunne's. In spring 1902, Dunne dreamed precognitively of four thousand deaths in a volcanic explosion on the island of Martinique. Days later, he received a newspaper reporting the eruption:

The number of people declared to be killed was not, as I had maintained throughout the dream, 4,000, but 40,000. I was out by a nought. But, when I read the paper, I read, in my haste, that number as 4,000; and, in telling the story subsequently, I always spoke of that printed figure as having been 4,000, and I did not know it was really 40,000 until I copied out the paragraph 15 years later. (Dunne, 2001, pp. 22–23)

The actual count was around thirty thousand; Dunne was clearly precognizing his misreading of the newspaper. Wargo adduces many more examples of this kind of advance self-knowledge, where the precognizer is struck by the resemblance—if not identity—of a later newspaper or newscast to the images or information foreseen.²⁴ There is furthermore good evidence that future experience of the percipient in the form of feedback can be useful in precognition experiments, too (Targ, 2012, p. 139). But if an idea like this is to hold water as a general theory, there ought not to be cases that outright contradict it—and there are many. Even in straightforward laboratory experiments, there were successful trials in which the viewers never received feedback (Targ, 2012, p. 132). From the remote viewing cases at SRI, we have Pat Price clairvoyantly describing secret Soviet activity a quarter of the way around the globe, activity that was unknown in the West and that was not verified until two years after Price died (Targ, 2012, pp. 53–55; see also Price's viewing of Rinconada Park below). From Myers (1895b, pp. 505–506), we have a case in which a woman had a prevision of a scene later witnessed by a doctor who

recorded the events—the woman herself never saw it. In neither case did the percipient have an opportunity to access his or her own future perception.

Moreover, Wargo's idea cannot account for much clairvoyant perception. We have, for example, someone who envisions her friend stumbling on the steps leading up to her house—but her detailed, accurate perceptions are from a point of view that no human being actually had (Tyrrell, 1946a, pp. 76–81). Similarly, Myers (1895b, pp. 568–570) has a case in which a woman dreams of being at the house of a friend who has three relatives on a ship that is sunk in a collision. In her precognition, the dreamer sees the accident happen, which neither she nor her friend did. As Myers says, "It seems impossible even to suggest any finite mind as the source of intelligence" (p. 568). Polish psychic Stefan Ossowiecki, given an object or sealed document, would routinely describe the situation of its creation and provenance in detail from a third-person clairvoyant perspective, observing a room and its inhabitants, visitors, and furnishings (Barrington, Stevenson, & Weaver, 2005, especially p. 144).²⁵ In the remote viewing research,

the subjects commonly report that they perceive . . . visually as though they were looking at the object or place from a position in its immediate neighborhood. Furthermore, the subjects' perceptual viewpoint has mobility in that they can shift their point of view so as to describe elements of a scene that would not be visible to an observer merely standing at ground level and describing what he sees. (In particular, a subject often correctly describes elements not visible to the target demarcation team.) (Puthoff & Targ, 1976, p. 346)

Arguing that cases like that represent a precognition of the viewer's future mental state is a stretch that would drive William of Ockham to drink. If it is more parsimonious to describe a precognitive (or retrocognitive) event as purely clairvoyant, then why not describe it that way? There certainly are cases best described as the perception of a future state of the percipient's own mind, and feedback may sometimes play a role in precognition, but neither is necessary.

Another of Wargo's ideas involves closed causal loops. And there are certainly cases in which the foreseen event would not have happened without the precognition. My personal favorite, because it is both so clear and so silly, comes from Myers:

I have an intense horror of monkeys—I seldom look at one if I can help it—they are objects of such antipathy to me; and I dreamed that I was persistently followed by one such as I had never seen before, but which terrified me extremely, and from which I could not escape.

Thinking I should be better able to throw off the impression of my dream if I told it, I mentioned it to my family, and my husband recommended a short walk.

In consequence, and quite contrary to my custom, I arranged to take my children for a short walk, without their nurse accompanying me, and as their favourite walk was up Nightingale-lane, (Holland-lane), past another lane enclosed by the high walls of Argyll Lodge, the residence of the Duke of Argyll, I agreed to take them there, and when we arrived at Argyll Lodge, what was my horror to see on the roof of the coach-house the very monkey of my dreams! In my surprise and terror, I clasped my hands and exclaimed, much to the amazement of a coachman waiting outside, “My dream! My dream!”

This I suppose attracted the attention of the monkey and he began to come after us, he on the top of the wall, we beneath, every minute I expecting he would jump upon me, and having precisely the same terror I experienced in my dream. One of my children being very young we could not go fast, which added to my distress, but we succeeded in escaping it, and on my return home I sent a servant to enquire if a monkey had been seen there, for my state of nervousness was extreme. She was informed that that morning a rare and very valuable monkey belonging to the Duchess had got loose, and so the incident was explained. But my dreaming of it previously remains unexplained. (Myers, 1895b, pp. 488–489)

This kind of causal loop might offer a helpful way to think about cases like the pistol that failed after two shots or the dreamed debt (below). But it falls woefully short in elucidating so many, and I’m afraid that, even apart from his reliance on a materialist metaphysics, the clear, ingenious theoretical side of Wargo’s work is inadequate. Any hypothesis regarding precognition, no matter how beautiful, must defend itself against ugly facts.

TIME

What, then, is time? I know well enough what it is, provided that nobody asks me; but if I am asked what it is and try to explain, I am baffled.

—Saint Augustine, *Confessions*²⁶

Much ink has been spilled over the years about time’s many facets, the many ways it presents itself to human beings. Two sprawling collections have been published in the past decade about the philosophy of time (Bardon & Dyke, 2016; Callender, 2013). It is hardly surprising that neither has a word to say about precognition.

Although precognition requires a sense and model of time that is nonordinary, our normal experience of the world requires that our discussion generally use conventional language.²⁷ When we are looking at precognition, we are looking at the relationship of psi to time. The difficulty of pinning that relationship down is evident in the first great work of the Society for Psychical

Research, *Phantasms of the Living* (Gurney, Myers, & Podmore, 1886). Cases are detailed that occurred across a twenty-four-hour span, twelve hours before to twelve hours after a crisis—usually a death—and if anything is clear, it is that there is no differentiating across that span. The authors interpreted the phenomena as telepathic, delayed or slightly in advance of the actual event, but as cases have been collected over the years, it has become evident that there is no differentiating across a much larger span of time—retrocognition and precognition reach across days, months, and years.

The greatest coherent challenge to a theory of precognition has to do with the demands it puts on our everyday conception of time and, with it, causality. Simply put, how can something in the future—something that hasn't happened yet—have an effect on the present? The question is framed from a simple, commonsense point of view, a commonsense definition of time. It takes as a given that time flows forward, that the past is gone and fixed, that the present is wherever we are right now and is constantly moving, and that the future is still unformed and yet to take shape—*que sera, sera*. But precognition tells us that thinking this way about time is fruitless. Every serious investigator of spontaneous precognition has come to the same conclusion. (This is not arguing from authority;²⁸ it is arguing from experience.)

As we get some further glimpse into the laws which underlie our varied phenomena, we see more clearly that retrocognition and precognition . . . cannot safely be set aside as isolated problems. . . . Their relation to time is as unknown to us a priori as is their relation to space or to physical causation. (Myers, 1895a, p. 336)

What we can say, with some confidence, is that our ordinary idea of the nature of time is clearly inaccurate, and that the odd and bizarre phenomenon of precognition must make us prepared to accept radical, and possibly fantastic-seeming, modifications of it. (Saltmarsh, 1938, p. 101)

It is very hard to resist the view that the subliminal self exists outside temporal conditions as we know them, or, at any rate, exists in a different kind of time. Time, as we know it, may be a special condition applying only to the physical world or to our conscious appreciation of it. . . . Perhaps we ought to try to understand some of the characteristics of the subliminal self before tackling the problems of time and precognition. (Tyrrell, 1946b, p. 96)

In a world governed by the causal and temporal principles as presently conceived, it is sufficiently difficult to figure out a way by which a nonexistent future event could cause a present one, without also trying to account for its possible avertibility. . . . Such redefining would seem to necessitate the altering

of established concepts of causality and time, and that need may be the heart of the present difficulty. (Rhine, 1955, p. 32)

Thus true precognition may occur and may require some of the more recondite explanations that upset our habitual notions of causation and time. (Stevenson, 1970, p. 196)

If the facts of precognition are in conflict with our customary ways of thinking about time, then our ways of thinking about time need changing. (Thouless, 1972, p. 140)

If we accept . . . that experiences involving precognition do occur it follows logically that we must abandon the concept of one-dimensional time . . . , i.e. time as represented by a straight line, with the past behind us, the present as the moment in which the eye and brain take in what is written here, and the future as all that stretches before us. (MacKenzie, 1974, p. 146)

In one marvelously confounding episode at SRI, a talented psychic (Pat Price) sat in the laboratory in 1974 with the experimenter (Russell Targ), while two other experimenters traveled to the target destination: a public swimming pool complex (Rinconada Park) about five miles away (Targ, 2012, pp. 60–63). When the time came for Price to describe the target, he described much of it accurately but went on to call it a “water purification plant.” He drew nonexistent storage tanks and machinery. Targ assumed that Price had layered his own interpretation onto the existing pools of water, which remote viewers sometimes do.²⁹ Twenty years later—long after Price had died—Targ “was stunned to read” in a newly published centennial celebration of Palo Alto that “‘in 1913 a new municipal waterworks was built on the site of the present Rinconada Park.’ The photograph . . . [showed] two water tanks exactly where Price had drawn them! Rinconada Park had only replaced the water treatment plant in 1922” (p. 61). In this case, Price had described something long gone, without any psychological differentiation from his descriptions of present or future targets.

There are several ways to approach this incident. One way is to consider that the photograph Targ eventually saw was already in existence and that Price somehow accessed that image. Another is that there were certainly people who remembered the water purification plant, and Price somehow accessed their memories. Yet another is to adopt the stance that there is some sort of permanent record of just about everything (the “akashic record,” or collective memory), accessible to certain people under certain conditions.³⁰ But what seems simplest is that Price just saw the park at the wrong time. This is something that happened occasionally in remote viewing when the

instructions to the viewer were not specific enough, and it has happened to other sensitives as well (e.g., Osty, 1923, p. 224). If the viewers sometimes cannot detect any telling difference in the perception of past, present, and future, why should we insist that the difference exists?

Imants Barušs and Julia Mossbridge (2017, pp. 53–81) incorporate the rogue phenomena of psi—particularly precognition—into an exploration of time. Based on the reality of subjective experience, they

assume that conscious awareness of subjective time has its own validity, without assuming anything about the nature of physical time outside of conscious awareness. With such an assumption, we can investigate apparent subjective time independently without worrying about whether what we are examining is illusory relative to a physicalist framework. (p. 60)

For physicists, relativity theory produces a spatialization of time expressed in the block universe. Three dimensions of space are joined by a fourth dimension of time. The result is a static model of reality, with the past, present, and future determined and unchanging. The ramifications and implications of this model have led to considerable debate (Barušs & Mossbridge, 2017, pp. 55–56). There are also psychological situations—altered states—in which time is spatialized; that is, it is perceived in a two- or even three-dimensional form (see below).

It seems unwise, however, to equate (or conflate) these physical and psychological notions of spatialization. Physicist Richard Feynman proposed a theory that involved particles moving backward in time, but, as fellow physicist Henry Margenau (1954) wrote,

the word time, in its peremptory sense, means temporal awareness, time immediately experienced; in the other sense it means the time of physical theory, stabilized by axioms of structure and by a special choice of clocks. To say that the two are the same will be recognized as nonsense. . . . It is therefore unwarranted to take Feynman's theory as asserting anything at all about the "true," experienced direction of time. (pp. 88–89)

Many near-death experiencers (see Greyson, Chapter 1 in this volume) have a life review in which they perceive some past moments or even (they feel) their entire lives. Some of them talk about this as happening all at once, sometimes as if projected on a screen from beginning to end. But their description of time in these cases is not simple and linear—it can be instantaneous and all-encompassing (Barušs & Mossbridge, 2017, pp. 72–75; Ring & Valarino, 1998, pp. 149–150; Stevenson & Cook, 1995): "An NDE [near-death experience] appears to take place within some sort of subjective

deep time. It is almost as though a person has ‘popped out of’ subjective apparent time for a while” (Barušs & Mossbridge, 2017, p. 74). The same sort of spatialization showed up in a very different environment in the early twentieth century when Eugene Osty (1923) was working with a group of sensitives adept at precognition:

Errors of time are . . . common; for except in the few cases in which mental representation or automatic expression of a date and a number of days or years arises spontaneously, the sensitive has to estimate time, both as to its mode and extent, by interpreting the artifices of the imagination, variable in different sensitives and always of doubtful import.

M. de Fleuriere, for instance, derives his ideas of time by vision on a semicircular screen on which the events of a life are symbolically projected. The events pertaining to the present are in the middle, straight before the eye, those of the past to the left, and those of the future to the right; and the distances from the centre indicate their approximate position in the life.

Mme Morel . . . knows that an event is in the past when her informative hallucinations are, as it were, behind her; a present event is at her side and a future one in front, all in a perspective corresponding to some sort of spacing in time. This symbolism, however, suffices so well to her conscious interpretation that during twelve years I have never known her place an event in the wrong mode of time. (p. 224)

Reports from near-death experiencers, mystics, and others present time in a mode very different from our standard linear world. Elizabeth Krohn, for example, had an NDE after being struck by lightning (Krohn & Kripal, 2018).³¹ She tried to describe the way time presented itself during the NDE. On the one hand, during the experience, time was instantaneous and eternal; on the other, she felt that two weeks passed, although her body lay on the pavement for just minutes. She learned of things that were yet to happen, both personal (a third child, a divorce) and public (an election result, a Super Bowl contestant):

I know this is confusing. I honestly do not know if the near-death experience itself was linear, or whether I just need to remember it in those terms in order to decipher it. My gut feeling is that (a) time there was not linear, but (b) linear time is my only frame of reference here. . . . I comprehended this concept of simultaneous time while I was in the Garden much more clearly than I do here. (pp. 28–30)³²

As Rosalind Heywood, a researcher and psychic herself, said of a deep mystical experience, “One can’t hold the attitude, of course. But one can faintly, very faintly, remember it, or rather an echo of it” (quoted in Marshall, 2019, p. 184).

Anita Moorjani (2012) experienced a profound NDE and described her perspective on time this way:

Time didn't run linearly the way we experience it here. It's as though our earthly minds convert what happens around us into a sequence; but in actuality, when we're not expressing through our bodies, everything occurs simultaneously, whether past, present, or future. (p. 67)

What subsequently happened is incredibly hard to describe. First, it felt as though whatever I directed my awareness toward appeared before me. Second, time was completely irrelevant. It wasn't even a factor to consider, as though it didn't exist.

Prior to this point, doctors had conducted tests on the functioning of my organs, and their report had already been written. But in that realm, it seemed as though the outcome of those tests and the report depended on the decision I had yet to make—whether to live or continue onward into death. If I chose death, the test results would indicate organ failure. If I chose to come back into physical life, they'd show my organs beginning to function again. (p. 74)

When we are considering this position from an ordinary frame of mind, it doesn't make much sense. But it resonates with the perceptions of mystics and sensitives, and it sounds like a state in which Elizabeth Krohn's precognitions would not be unnatural.

If we look at the work of Osty's sensitives or the reports from near-death experiencers or mystics, we find reports of temporal experience in which the future is not privileged over the past. It is certainly true that in ordinary experience, the past has occurred and the future has yet to happen.³³ Ordinarily, we know of the past in a way we do not know of the future. And yet, if we look at evidence for retrocognition, it is only less perplexing because we are used to memory, thinking about the past as somehow having been recorded. But where? In what or whose memory? When we look at the work of Stefan Ossowiecki, we see that he retrieved information about past events that happened at any arbitrary distance from him as if he had been there, watching from a third-person perspective. Why is that less remarkable than his looking into the future and retrieving information about something there? Reality is no more (or less!) stored from the past waiting to be perceived than it is stored from the future. The only difference is the question of pastness and futurity, and in Pat Price's remote viewing episode involving Rinconada Park (described earlier), it is clear that he had a seamless experience of present and past (or future if we assume he foresaw Targ's discovery of the photograph). The PEAR researchers found no difference in remote viewing accuracy whether the target was visited before or after the viewing session (Dunne & Jahn, 2003, pp. 222–223; Nelson, Dunne, Dobyns, & Jahn, 1996, p. 110).³⁴

We see in the experience of Osty's sensitives that they see the past and the future as an undifferentiated whole.

Sometimes time simply seems irrelevant. One of Osty's sensitives (Mme Morel) was asked to locate an elderly man who had wandered from his house on a large estate three weeks earlier and was feared dead (Osty, 1923, pp. 104–109, 198–199). The sensitive asked for an article of the man's clothing and was given a scarf from his house. Using the scarf as a contact point, the sensitive was able to trace the man's route and locate his body, which lay on the ground about half a mile from his home. What is interesting for us is that the scarf had been in the cupboard while the man was out lost; yet the sensitive could reach back to establish contact with the man and then, from there, forward to his death—all in the past. Where does time figure in all this?

The psychology of the precognitive experience is sometimes likened to memory in that faint memories can bubble up from the subliminal in dreams or while awake in the same way that premonitions do. But that is a very limited analogy, in that ordinary memories spring from lived experience (even if the experience is intellectual or emotional). The proper comparison is to retrocognition like Ossowiecki's or Osty's sensitive, which appears to be the precognitive faculty exercised in the opposite direction.³⁵ Osty's research led him to the conclusion that in some way we embody our entire lives, past and future both, and that sensitives (or we ourselves, in retro- or precognitive moments) can become aware of that aspect of our (and others') selves (Osty, 1923).³⁶

The concept of the specious present,³⁷ as proposed by William James from psychological observation, has been occasionally pressed into service for theorizing about precognition. The idea is that the experienced present is not instantaneous but has duration—it incorporates a bit of the past and future. We see in the experience of William Braud (1995) an expansion of the specious present until it engulfs great swaths of both past and future:

The present slice of time slowly enlarges, encompassing, still holding, what has gone just before, locally, but increasingly nonlocally as well. By now, I am standing near the kitchen sink. The present moment continues to grow, expand. Now it expands into the "future" as well. Events are gradually piling up in this increasingly larger moment. What began as a thin, moving slice of time is becoming thicker and thicker, increasingly filled with events from the "present," "past," and "future." The moving window of the present becomes wider and wider, and moves increasingly outwardly in two temporal directions at once. It is as though things are piling up in an ever-widening present. The "now" is becoming very thick and crowded! "Past" events do not fall away and cease to be; rather, they continue and occupy this ever-widening present. "Future" events already are, and they, too, are filling this increasingly thick

and full present moment. The moment continues to grow, expand, fill, until it contains all things, all events. (p. 64)

If, in these unusual states of consciousness, there is no significant differentiation between past and future, then why make so much trouble about it when we are talking about precognition? This is not a physical phenomenon—this is a phenomenon rooted in human consciousness (or something larger).³⁸

Standard psychology does not treat experienced time in a way that is helpful to our understanding of precognition. It does not, for example, treat the experience of atemporality. According to Benny Shanon, a psychologist who has studied the Ayahuasca experience scientifically and personally,³⁹ time doesn't get slower and slower until it stops—in fact, it seems to go faster when it stops, another statement that in ordinary language is senseless. We encounter “an altered semantics of time. Essentially, the experience is not of time passing slower, but of time ceasing to be relevant. It is not that one moves more slowly in time, but rather, one enters a frame of being which is, so to speak, outside of the province of time” (Shanon, 2001a, p. 46). In this “frame of being,”

everything that has ever happened, as well as everything that will ever happen, all have an equal temporal status. In a certain sense, they are all there and one only has to look at them. . . . A perspective is taken by which all that will have happened at all times is co-present. In this limit situation, the temporal may, in a fashion, be reduced to the spatial. (p. 47)

This is not language we can apply to our normal experience of the world. But it is language that describes a temporal framework made for retro- and precognition. Precognitive experiences are rarely accompanied by this kind of altered perception of time. But it is a perspective available to a human being, and, like the descriptions offered by Osty's sensitives, it is too potentially meaningful to be ignored.

This psychological time has two aspects, one that seems symmetrical from the present and the other that has a directed arrow.⁴⁰ The symmetrical aspect is what we have been describing: the way certain gifted sensitives or mystics see time as a continuum, past, present, and future, or the way they apprehend the past and the future as undifferentiated sources. Neither past nor future is easier or harder to access, and in fact they are sometimes confused, one for the other.

But there is another puzzling aspect of time in the world that bears indirectly on precognition: no one, in any state of mind—psychic, mediumistic, or mystical—except psychedelic, ever reports perceiving time moving *backward*.⁴¹ Someone experiencing an NDE may go through a life review, and

that life review may run from the percipient's current age back to his or her childhood, but what it shows is a series of scenes in reverse sequence (or on a "screen"), each individual scene playing from beginning to end in proper chronological fashion. No one has ever reported a scene in a life review playing from end to beginning.⁴² This says something important about the world and our experience of it. For example, the Minkowski block universe is often referenced as a way of making the future or past accessible to "current" observation. But if indeed there exists some four-dimensional representation of our space and time in which we can observe (or experience) moments other than the present, why can't we observe a scene from end to beginning? When Stefan Ossowiecki related the retrocognitive impressions he received from a document he was holding, he would describe the circumstances under which it was written, from the physical layout of the room to the frame of mind of the composer to the people who interrupted the document's composition. He observed from a third-person perspective, and he went back to the beginning of the scene and told the story in the order in which it occurred. Why should this be the case? Why shouldn't a percipient sometimes "land" at the end of the scene and work through it backward?⁴³

Philosophers have argued about the arrow of time for millennia, and physicists have joined them in the past couple of centuries. But all these arguments were based in either logical abstraction or the material world of physics. Any argument we make or entertain here must answer to the phenomena of psychological research, particularly retro- and precognition. Clearly, there is something about the way our consciousness inhabits the world (or vice versa) that compels our experience to move forward in time. Perhaps it is simply that, like scrambled eggs or nuclear decay, human consciousness "works" in only one temporal direction. Our bodies work that way, our minds work that way, and our experience of the world—except in extraordinarily rare instances—works that way.

There are metaphysical systems—from the Neoplatonists and Patañjali to neutral or dual-aspect monism to panentheism—that have room for psi (and precognition).⁴⁴ Our empirical investigation of time and consciousness has the potential to proceed, and the results can be considered against those systems. As Myers (1895a) wrote,

I imagine that the Continuity of the Universe is complete; and that therefore the hierarchy of intelligences between our minds and the World-Soul is infinite; and that somewhere in that ascent a point is reached where our conception of time loses its accustomed meaning. . . . The idea, of course, is familiar enough to philosophical speculation. The novelty is that this, with many other ideas which have hitherto floated gaseously *inter apices philosophiæ* [among the peaks of philosophy], like helium in the atmosphere of the sun, may now

conceivably be tested in earthly laboratories and used as a working explanation for undeniable facts. (p. 340)⁴⁵

The directed aspect of time takes a little more explaining and will move us into an examination of causality as well.

CAUSALITY

Is there anything in current science that might help us with causality and precognition?⁴⁶ When we approach questions of causality in the ordinary world, discussion takes place in the context of the forward-flowing time of everyday physics.⁴⁷ If we are going to broaden our understanding of time, as the previous section suggests, we will do well to look in places other than physics for models and hints that can help us make sense of precognition.⁴⁸ Physics is a rich source of analogy⁴⁹ and can be shown to accommodate parapsychological phenomena,⁵⁰ but it has little direct to say about them.

Aristotle devised his four causal categories—efficient, formal, material, and final—to account for the physical world (Falcon, 2019), and when we think about psi, they can be a tough sell (as we saw with the investigators' quotes earlier). That causality does not hold in exotic physical realms is well known (Mossbridge & Radin, 2018a, p. 114), but even before quantum mechanics, more than a century ago, Bertrand Russell (1913) challenged its very existence as a scientific tool:

The reason why physics has ceased to look for causes is that, in fact, there are no such things. The law of causality, I believe, like much that passes muster among philosophers, is a relic of a bygone age, surviving, like the monarchy, only because it is erroneously supposed to do no harm. (p. 1; see also Price & Corry, 2007; Radin, 2006b, pp. 392–393)⁵¹

Russell, arguing from the deterministic, mathematical nature of late nineteenth-century physics (Friederich & Evans, 2019), was hardly unchallenged himself. Scriven (1975), for example, refers to “the enormity of Russell’s misconception” (p. 5). But we can let that battle rage; regardless, when the cat pushes something off the table, it falls, and we can consider everyday causality in our everyday world.

The idea of “retrocausality,” or the future acting on the past, can be postulated only in the context of linear time. Should we get excited about retrocausation at the subatomic level? Physics offers spectacularly rational possibilities for backward causation at the quantum and cosmological scales, but they shed little light on the real-world phenomena of pre- and retrocogni-

tion.⁵² Stephen Braude (1991) has done a masterful job of demolishing the idea of backward causality in everyday events (pp. 256–277). Forward causality in the ordinary world involves any number of causal streams coming together and then ramifying into the future. By laying out the complexity of how we construct normal, *forward* causal relationships, Braude shows the emptiness of the entire notion of retrocausality. Radin (2006b, pp. 391–397) discusses causality, forward and backward, but inclines to an acausal model (Radin, 2006a; see below).

Discussions of backward causality involve simple concepts with a peculiar, unspoken feature: the retrocausal influence propagates backward in time and stops at the beginning of the present event that is the supposed effect of the future cause. The present event then proceeds in a proper time-forward fashion (as we saw earlier with retro- and precognitive perceptions of events). That’s convenient but indefensible. (And would we even be able to tell if retrocausation played through the scene backward?)

Besides the logical vacuity of such an explanation, there is the further problem that although the future may exist to be perceived, future “events” do not. As Braude (2011) says, “Events are not items in a perspective-independent warehouse of ontological furniture” (p. 3; see also Braude, 1991, pp. 256–277). In the world of precognition, we might take it for granted that tomorrow’s automobile accident is an event, but why shouldn’t the event begin with or simply be what came before (or after)—a driver in tears or a small child screaming in the backseat or a plumbing mishap that made a driver late for work? Why should it be two people standing in front of a fireplace years off in a distant land? What is the event? An event does not exist until someone delineates it, beginning and end, in our case by precognizing it. Even something as apparently defined as an automotive accident is a moment in a continuous series of occurrences. (And we cannot even use “meaning” to define a precognized event since some are so utterly meaningless.⁵³) Invoking retrocausality results in a situation where some undefined future episode causes something in the present through a mechanism that makes no sense.

It is true that in presentiment experiments, the future events are in fact carefully defined,⁵⁴ and they are also defined (if less precisely) in remote viewing, but episodes of precognition in the wild do not have that preparatory foreknowledge on anyone’s part. In every case—presentiment, remote viewing, and spontaneous cases—the “target” is indeterminate at the time of the feeling or perception. In the presentiment work, there are clearly defined (if unknown to the subject) future events that the subject is working toward, but the anticipation never rises to consciousness and must be statistically inferred from the full result.⁵⁵ In remote viewing, there are also defined targets, even if they are cognitively impenetrable to the subject, such as obscure geographi-

cal coordinates given to participants in the SRI work. (In one case, a viewer was given the latitude and longitude of a tiny island in the South Indian Ocean, which he drew and described with startling accuracy [Targ, 2012, pp. 27–29].) And finally, there is the undifferentiated future—without defined events—into which the spontaneous cases take us.

Eastern logic and metaphysics offer a possibly helpful perspective. According to Bryan Van Norden (2017), a scholar of Chinese philosophy and culture,

Buddhist metaphysics regards the world as composed of transient states and properties that are causally dependent on other states and properties. It does away with the notion of metaphysical substances or prime matter as explanatorily useless. This ontology of states rather than things has substantial (pardon the expression) implications for how we think about ourselves. (p. 44)⁵⁶

That change of ontological perspective is well beyond the scope of this chapter, but it might hold out the hope of an interesting, serious approach to psi, something that Western philosophy has found so difficult and that Kelly et al. (2015) and this volume are trying to rectify.⁵⁷

Finally, though, the whole notion of cause and effect in precognition is misplaced. When we are talking about precognition, injecting causality into the picture is a category mistake:⁵⁸

The mechanism for access into the hypothesized great storehouse of memory external to ourselves is not likely to be in prescriptive, mechanistic terms, and may be in terms that are beyond the reach of our understanding. Considered another way, requesting an explanation might be to commit a category error, like asking how, in a dream, when you were riding a bicycle one moment and then found yourself immediately riding a horse, how did you get from the bicycle to the horse? The answer will not be in terms of time and motion. (Barrington et al., 2005, p. 149)

Dunne and Jahn (2003) found that their habitual use of causal language and reasoning blinkered their understanding of possible contexts for remote viewing and that the evidence “is more compatible with an acausal, or synchronistic, model than with a causal one” (p. 234). In fact, they were led to conclude “that objective linear causality may not prevail under these circumstances” (p. 235; see also Jahn, 1989) and that trying to shoehorn precognition into a causal frame is a waste of effort.

A short discussion of Carl Jung’s acausal “synchronicity” would not be out of place here. Jung rooted his idea in the apparently acausal, statistical world of particle physics. He felt that the end of causality at the subatomic level could be extrapolated into the larger world and that it was a useful description of meaningful coincidences otherwise not causally related (Jung, 1973;

Jung & Main, 1999, pp. 24–25). It has been critiqued (e.g., Beloff, 1977; Jung & Main, 1999), but the concept has carved out a niche in Western culture (although, unsurprisingly, it does not appear anywhere in the *Stanford Encyclopedia of Philosophy*). It is a very seductive idea for precognition, but for the word “meaningful”—there are far too many precognitive episodes that are trivial and so, as noted above, could be considered meaningful only because they were precognized.⁵⁹ As a general model, it is too limited.

One way to approach these problems is to step back far enough to see Aristotelian logic as just one tool that can be used to analyze the world, rather than a given (Priest, Berto, & Weber, 2018; Van Norden, 2017, especially p. 6). The law of the excluded middle and the law of noncontradiction, closely related mainstays of Aristotelian logic, are useful in everyday life but have their limits. Our standard logic chokes on sentences like “This statement is a lie,” which if true is false and if false is true, or Russell’s paradox—“There is a set that has as a member every set that is not a member of itself”—which both does and does not have itself as a member. But there are logics that embrace paradox, that go beyond a statement being simply true or false, recognizing statements that are at once true and false and statements that are neither true nor false. Traditionally, such systems have found a home in mysticism or Buddhism, and for that very reason they have been treated as inconsequential by mainstream Western thought. But beginning with quantum mechanics and then more broadly in the second half of the twentieth century, these paraconsistent logics have been developed and pursued by mathematicians and philosophers,⁶⁰ and dialetheism—which allows contradictions to be true—now has a respectable (if contentious) position in Western philosophy.⁶¹

There is a phenomenon in physics (entanglement) in which the measurement of one part of a system immediately and without communication dictates the value of that property for a related but distant part of the same system. It does not involve communication—Einstein famously called it “spooky actions at a distance” (“spukhafte Fernwirkungen”; Einstein, Born, & Born, 1971, p. 158) and never accepted it. But Hans Primas (2007) points out that entanglement is a “mystery” only if we start with a mechanistic model of the physical world. If we begin with the premises laid out by quantum mechanics,

entanglement is not *The Greatest Mystery in Physics*, but one of the most often misunderstood and misrepresented concepts—even in physics, where the related experiments form already an important part of modern technology. It is an inevitable and generic consequence of partitioning a non-Boolean whole which has no parts. If we accept the insight that there are no ultimate building blocks, there is nothing spectacular or controversial about the existence of holistic correlations. In particular, holistic correlations require no explanations in terms of “forces.” (p. 28)

Analogously, precognition and psi are strange or impossible only in the context of linear time and causality.

Dean Radin (2006a), arguing for an expanded concept of mind, expressed the situation succinctly:

Maybe it doesn't involve information transfer at all. Maybe it's purely relational and manifests only as correlations. . . . We can get glimpses of information about other people's minds, distant objects, or the future or past. We get this not through the ordinary senses and not because signals from those other minds and objects travel to our brain, but because at some level our mind/brain is already coexistent with other people's minds, distant objects, and everything else. To navigate through this space, we use attention and intention. From this perspective, psychic experiences are reframed not as mysterious "powers of the mind" but as momentary glimpses of the entangled fabric of reality. (p. 264)⁶²

There is no physical perspective from which precognition can be analyzed. It is not a function of signals traversing space or time—it is one of attention and intention.⁶³

There are no hidden variables that will allow us to break precognition down reductively. In a world of linear time, seeking causality for Ossowiecki's retrocognition is as fruitless as it is for precognitive remote viewing. We need new perspectives. Neither ordinary time nor ordinary causality works.

FREE WILL

All theory is against the freedom of the will; all experience for it.

—Samuel Johnson, *Life*⁶⁴

My first act of free will shall be to believe in free will.

—William James, diary entry, April 30, 1870⁶⁵

The question of intervention dogs precognition: If we "see" something in the future, can we change it? If we can and do, what exactly did we "see"? And if we can't, do we have free will?⁶⁶

Some theorists use the idea of probable futures to explain the apparent paradox of intervention: If a future event is foreseen and then averted using that foreknowledge, the percipient obviously didn't see the future! Perhaps we "see" probable or possible futures, and our choices realize one or another. Myers (1895a) has a case he calls "a curious incident where the retrocognised fact, although in one sense extremely accurate, was so presented as to be wholly misleading; and in a way in which no assignable intelligence

... would have been likely to have presented it” (pp. 402–403). A man who had bought a house dreamed that he encountered a sheriff who told him that the house was going to be sold for an old unpaid judgment against a former owner, now deceased. On his way to work the next morning, the owner stopped in to see the son of that former owner, thinking he might find the dream interesting. The son was more inclined to be amazed: his father had once owed a debt to the man whom the sheriff (in the dream) had mentioned, but it had been paid in the regular course of business. His ledger showed that the debt had been slightly less than the amount the sheriff mentioned in the dream—but had the debt not been settled and interest allowed it to accrue up to the time of the dream, it would have been exactly that amount.

It is difficult to make sense of the tangled details that make up this situation, but Myers was never afraid of such cases. For us, is it retrocognition of a possible past? Or was the dreamer’s subliminal mind good at both grasping the past and doing math while asleep?

I have argued against the idea of intervention changing a foreseen future, instead using the psychology of subliminal perception to make the percipient responsible for the construction of the prevision to a greater or lesser extent. And cases like the bright smile (above) would seem to indicate a definite future. But perhaps I am wrong; perhaps the future exists as probabilities and precognition sometimes sees a probable path, not a certain one. Reports of the temporal perceptions of mystics, seers, and near-death experiencers sometimes support the notion of a probable future. When near-death experiencers have “life previews”—future-oriented versions of the more common life reviews—“the precognized events . . . are sometimes reported as alterable, conditional on choices to be made, or sometimes as ‘already there,’ as fully existent as the present from which they are viewed” (Marshall, 2015a, p. 51; see also Grey, 1986, pp. 117–121).⁶⁷ In an interview, Anita Moorjani (Bolsta, 2011) said of her NDE, “Time seems to have a completely different meaning on that side. What I felt was that all possibilities exist simultaneously—it just depends which one you choose. Sort of like being in an elevator, where all the floors of a building exist, but you can choose which floor to get off on.”⁶⁸ If these nonordinary perspectives possess any truth, different possible futures may indeed be available—at least sometimes. (Elizabeth Krohn, we saw, returned from her NDE with several straightforward “facts” about the future.) Sadly, we lack a vocabulary and conceptual scaffolding that would allow us to analyze such perceptions.

The idea of a probabilistic future is seductive. It makes room for the reality and role of free will. But it collides with such distant, clear, definite previsions as the bright smile case. Moreover, in cases where a precognition seems to result in an averted event, we often find annoying, unaccountable

details—like the actual direction of travel of the carriage before the coachman fell off or the location of the other carriage accident—that do not match the precognized scene and are difficult to understand in a probabilistic scenario. Once we move away from insisting on a filmlike literalness in every detailed precognition, we see the percipients inserting themselves in a scene's construction. However, at the same time, it is necessary to allow for the precisely accurate previsions, the rents in the veil. We must have it both ways!

The nature of time and causality may be just as puzzling as the apparent contest between free will and a foreseen future, but we feel this dilemma personally. Like time and causality, it has been the subject of debate for millennia (as Milton observed earlier).⁶⁹ For Aristotle, free will was pitted against fatalism ("when your number's up, your number's up"); for theologians a thousand years later, it faced an unalterable future foreseen by an omniscient God; for post-Newtonian scientists and philosophers, it was torpedoed by simple mechanistic determinism. And yet, as willing as philosophy and science in general were to embrace the metaphysical implications of the Newtonian universe, they have proven equally unwilling to embrace the implications of the early twentieth-century physical universe that replaced it. Causal determinism still rules the broader scientific roost. Today's neuroscience assures us that free will is an illusion, and mainstream psychologists follow in lockstep: "From a psychological point of view, discussing free will is like asking a zoologist to lecture on unicorns" (Kelly, 2010, p. 241).⁷⁰ That confidence rests, of course, on the metaphysical bedrock of materialism. If we discard that fundamental assumption—and the evidence against materialism seems quite sufficient to discard it—the arguments lose their foundation. Determinism can no longer be taken for granted. Free will is still in play; if it doesn't exist, the evidence will not come from a materialist argument.

Some philosophers defend free will as "hard-core" common sense (Griffin, 1998, pp. 16–21, 34–41)—one of "*those notions that all human beings inevitably presuppose in practice, even if and when they deny them verbally*" (p. 18)—as opposed to "soft-core" commonsense notions, such as "the Earth is flat."⁷¹ A strong case can be made this way—it makes sense to me—but it does nothing on its own to eliminate the problem of determinism. Philosopher John Searle (Griffin, 1998) puts it plainly: "We don't navigate the earth on the assumption of a flat earth, even though the earth looks flat, but we do act on the assumption of freedom. In fact we can't act otherwise than on the assumption of freedom, no matter how much we learn about how the world works as a determined physical system"—and then he plows ahead with his version of causally bound physical theory, giving the laurel to determinism and rejecting free will (pp. 39–40). Griffin (1993) himself accepts free will,

but he denies the possibility of precognition because in the Whiteheadian world the future is entirely potential and therefore cannot be apprehended.

When someone has a vague foreboding or a dream about a plane crash and so decides to delay a business trip, therefore not getting on a flight that crashes, it's easy enough to see it as a prevision of the plane crash itself leading to a freely made choice that produces a happy ending. But in the case of the bright smile seen so far ahead, we have an occasion preceded by years of decisions, thousands of choices on the parts of many people, all leading to a foreseen moment. It feels impossible to avoid the word "determined." We are not concerned with deterministic arguments from nineteenth-century physics or with those from a psychology or neurology steeped in that physics. For our purposes, precognition itself is the root of the dilemma. It is enough that the future can be foreseen, sometimes in detail. In such a world, can we make free choices?

Absolutely. Let us consider a "determinate" world (Sprigge, 1993, pp. 478–486; 2008, pp. 491–495).⁷² In a "determined" world, causality reigns. In a determinate world, precognition can show you something that is indeed going to occur, but the steps leading to that occurrence need not be a strictly determined causal sequence—free will is perfectly reasonable. The past is determinate: we know that last Saturday night after dinner, you read a particular novel, but that knowledge says nothing about whether your exercise of free will led to that action. Similarly, I may accurately precognize your falling into a lake next week, but that says nothing about your freely made choices between now and then.

What that differentiation actually does is *allow* free will in a universe where the future can be foreseen; it neither guarantees nor requires it. If causal determinism rules in that universe, free will is gone; if there is no free will in the past, there's none in the future.

But when most people consider free will in the context of precognition, they are asking whether the determinate, foreseen future can be averted by the exercise of free will. Is that even an answerable question? Without an impossible cast-iron guarantee that a prevision was wholly accurate, how would you know it did not include supplied events, like the coachman's hitting the pavement? There are anecdotal cases in which individuals make decisions they think will help them avoid a foreseen event only to find themselves fulfilling the prediction regardless, but none rise to the evidential standard of most cases investigated by the Society for Psychical Research.⁷³ More to the point, there is no reason not to see the choices made as *contributing* to the foreseen result—since that is exactly what happens—although the individual thought otherwise when making the choice. Too often we speak of some

action *changing* the course of events when we actually mean *affecting* (or even creating) that course. To say a decision changes the future implies altering a set course, but although we may foresee a moment in the future, we don't know how we're going to get there—or even if it is an accurate prevision or just a hypothetical construction of our own consciousness. We understand neither time nor psi well enough to say.

Free will and an accurately foreseen future are not opposites; the opposite of free will is causal determinism. Pre- and retrocognition tell us nothing about free will, and they tell us nothing about determinism. They can tell us only that the world is determinate: that something will or did happen. Whether that something is as precise as two men talking in a club in India, as almost precise as a coachman falling off his seat, or as vague as an uneasy feeling about upcoming train travel, we do not necessarily know what events or decisions led or will lead to it. Determinationism—as opposed to determinism—leaves the question open. If we combine a hard-core commonsense view of free will with a determinate picture of time, we can construct a reasonable world with agents who act freely and a future that can be foreseen. Moreover, this is a world that plays well with our previous discussions of time and causality.

CONCLUSION

Where are we left with our simple set of problems: time, causality, and free will? Our understanding of time is woefully inadequate to cope with precognition. We must reframe it if we are to have a chance. We have signposts left for us from NDEs, mystical experiences, and other altered states. William James (1897) wrote,

In psychology, physiology and medicine, whenever a debate between the mystics and the scientifics has been once and for all decided, it is the mystics who have usually proved to be right about the *facts*, while the scientifics had the better of it in respect to the theories . . . he who will pay attention to facts of the sort dear to mystics, while reflecting upon them in academic-scientific ways, will be in the best possible position to help philosophy. (pp. 302–303)⁷⁴

Are we to start with physics, as is the modern habit, and force mystical time into it? Or are we to start with mystical time, NDE time, and the temporal slippage of remote viewers and sensitives, and try to make a coherent framework out of those “facts”? Perhaps we are at a point where such experiences can be taken seriously enough on their own. Perhaps one of the worldviews offered in Part II of this volume will afford the scaffolding needed to create an adequate temporal model.

Perhaps.

Causality as an obstacle for precognition is a red herring. It is the wrong way to approach the phenomenon, and it is based on an outdated notion of the cosmos. Even the physics beloved of determinists has abandoned causality at its foundations. When we examine psi, we find ourselves in a realm lacking the comfort of ordinary space and time, without the assurance of the simple Boolean logic we learned in high school. Move along; nothing causal to see here.

Finally, we have free will and precognition, which turns out to be a false dichotomy. Free will is opposed to determinism. It is enough to declare the world determinate, with a future as definite and real as the past, a world in which individuals can make appropriately free decisions.

So making sense of precognition comes down to how little we understand time and how little we know about psi (or consciousness itself). It is encouraging that creative research in the past half century—on CORT and NDEs, for example—has revealed aspects of consciousness never systematically explored before. Recent experimental techniques, particularly in remote viewing, seem to offer means to probe precognition in equally far-reaching ways, potentially revealing equally novel prospects. We study magma in the laboratory to help us understand volcanoes, not to prove that they exist. It is time to give precognition its due.

As has been acknowledged again and again, accommodating the research done and the data collected—much less what might come—will require an epochal shift in the metaphysical foundation of scientific education and practice: the *foundation*, not the work itself. Statistical analysis, smartphones, osmotic membranes, cloud chambers, and polymerase chain reactions will all function as they have, but the world in which they function will be a very different place:

Most scientists are willing to accept new empirical data and to recognise new results, provided they fit into their philosophical framework. But in the course of scientific progress it can happen that a new range of empirical data can be completely understood only when the enormous effort is made to enlarge this framework and to change the very structure of the thought processes. In the case of quantum mechanics, Einstein was apparently no longer willing to take this step, or perhaps no longer able to do so. The letters between Einstein and Born . . . movingly demonstrate the degree to which the work of the scientist, which in its subject matter seems to be so far removed from all things human, is fundamentally determined by philosophical and human attitudes. —W. Heisenberg (Einstein et al., 1971, p. x)

We are allowed to hope.

NOTES

1. “Certe igitur ignoratio futurorum malorum utilior est quam scientia” (Cicero, 1915, p. 204); my translation. He is speaking of how dreadful Caesar’s life would have been had he known of his own future murder.

2. Le Guin (2019, p. 70). A Foreteller is explaining “the perfect uselessness of knowing the answer to the wrong question.”

3. “Il est fort heureux . . . que nous ne puissions rien connaître de l’avenir. Car vraiment l’inconnaissance de l’avenir est une des raisons de vivre” (Richet, 1931, p. 194); my translation. He is speaking of the roles of hope and curiosity in life.

4. Crookes (1874, p. 22). He is speaking of phenomena displayed by and around D. D. Home.

5. Not a set of simple topics.

6. Interestingly, at the same time that the English were delving deeply into questions of survival and the many aspects of mediumistic communication, the French were systematically investigating precognition along with other phenomena. Barington (2019) sees a cultural difference, a reflection of France’s Catholicism, which discouraged communication with the dead, and Britain’s laws against fortune telling, which made knowing the future doubly dangerous (pp. 71–72).

7. The line is from Milton (1821). He was not impressed by philosophers’ attempts to settle the question (2:557–565):

Others apart sat on a hill retired,
In thoughts more elevate, and reasoned high
Of providence, foreknowledge, will, and fate;
Fixed fate, free will, foreknowledge absolute;
And found no end, in wandering mazes lost.
Of good and evil much they argued then,
Of happiness and final misery,
Passion and apathy, and glory and shame;
Vain wisdom all, and false philosophy!

8. Ian Stevenson (1968) wrote, “Science is concerned with what *is*, not with what *ought to be*. In the spontaneous cases we have an abundant source of experiences which have been affirmed by many credible witnesses for centuries. If, as I believe, these cases are part of ‘what is’ then we should not abandon their study, but should improve it” (p. 123). When we look at spontaneous cases, we should remember that, as Herbert Saltmarsh (1938) said, “the evidence was collected and examined by experts in that line of business, [our] part has been only to select suitable parts thereof. Unless human testimony be rejected altogether as incapable of establishing matters of fact, that evidence cannot, in scientific honesty, be ignored, however inconvenient it may be to those whose philosophic systems it upsets” (p. 113).

9. Although the reputation of Rhine’s work has suffered for its narrow focus, at midcentury its impact was felt from fiction to philosophy. C. D. Broad (1962, 1967, 1976) was perhaps the most prominent philosopher who explicitly considered psi important, but other major figures took it seriously as well (Dongen, Gerding, & Sneller,

2014; Ducasse, 1951, 1961; French, 1975; Price, 1976; Scriven, 1956, 1962, 1972, 1976; Thakur, 1976; Wheatley & Edge, 1976), and one stumbles across it in odd places, such as the work of philosopher of science Mary Hesse (1970, pp. 295–303). For Carl Jung (Jung & Jaffé, 1965), hardly a laboratory scientist, Rhine’s “experiments prove that the psyche at times functions outside of the spatio-temporal law of causality. This indicates that our conceptions of space and time, and therefore of causality also, are incomplete” (p. 304). He used Rhine’s experiments as strong evidence for his notion of synchronicity (Jung, 1973, pp. 25–27, 33, 119; see also below).

10. G. N. M. Tyrrell (1946a) and C. J. Ducasse (Braude, 2016) wrote eloquently about the state of psi research and the problems with laboratory work.

11. That is, one of a known set of targets, like playing cards in a deck.

12. A comprehensive list of precognition experiments from 1935 to 1987 is given in Honorton and Ferrari (1989, pp. 302–308). See also Thouless (1972, pp. 130–142).

13. Several recent theorists have spoken of precognition in psychological contexts like this (Cheung & Mossbridge, 2018; Osborn, 1961; Targ, 2012). Eileen Garrett (in Osborn, 1961, pp. 7–12), an honest reporter and a proper skeptic, offers a psychic’s perspective.

14. This is a refutation of Morris’s (1982) argument.

15. A mild sensory deprivation technique, translated as “whole field,” in which the viewer’s eyes are given a solid, undifferentiated stimulus, as when covered with half ping-pong balls and bathed in red light (Parker, 2017). Honorton (1987) also performed a set of experiments with a gifted subject in a more standard laboratory setting; even in that, he found, in his careful language, “that the results provide evidence for a communications anomaly involving noninferential precognition” (p. 291).

16. Braude (2012) also bemoaned the lack of “a growing or robust trend in current parapsychology to focus more on field work or exceptional subjects” (p. 765), which is what remote viewing seems to promise. Many remote viewing sessions were unsuccessful, of course. But that takes nothing away from the hits, and, just as in any scientific exploration, failure can yield helpful insights. Naturally, such accuracy has never been (and may never be) enough to stop determined pseudo-skeptics from sniping and wasting researchers’ time and resources. In 1992, the scientists at PEAR “were distracted by the need to invest a major effort in preparing a systematic refutation to an article critical of PEAR’s earlier PRP [Precognitive Remote Perception] program” (Dunne & Jahn, 2003, p. 228). Distractions of this sort, especially given extraordinary work like Hella Hammid’s at SRI (Targ, 2012, pp. 67–83), are truly losses for the field.

In the same way, it is hardly necessary to conduct psi experiments in a Faraday cage, although they often are. It has been well established that psi is not an electromagnetic phenomenon. The only reason to continue is to negate pseudo-skeptics’ ever-present suspicion that there might be some surreptitious signaling. But full appreciation is due the scholars who take the time for public disputation. Researcher Charles Honorton and skeptic Ray Hyman (Honorton & Hyman, 1986; see also Kelly et al., 2007, p. 652) sparred for years in a collaboration that Honorton felt considerably benefited his work; Mossbridge and Radin (2018a) were not only pointed and precise in their refutation of arguments they had seen many times before but also unfailingly polite, even kind.

17. *Presentiment* studies unconscious foreknowledge (“feeling”) rather than conscious knowing (“*precognition*”) (Radin, 2016). The experimenters are careful to differentiate presentiment (predictive anticipatory activity [PAA]) from precognition: “In contrast to PAA, precognition may be defined as a perception or a behavior (not a physiological measure) that is influenced by future events. . . . Though it seems plausible that precognition is related to PAA, examination of that possibility is beyond the scope of this article” (Mossbridge et al., 2014, pp. 1–2). Because both presentiment and precognition insult our sense of time, I am treating them together here.

18.

Tiger got to hunt,
 Bird got to fly;
 Man got to sit and wonder, “Why, why, why?”
 Tiger got to sleep,
 Bird got to land;
 Man got to tell himself he understand. (Vonnegut, 1963/2006, p. 182)

19. Or in which the apparently perceived future is averted.

20. “It is as though a rent suddenly appeared in the veil which covers the future, and then closed again after permitting the subject to take a fleeting glimpse at what lies ahead” (Saltmarsh, 1938, pp. 104–105).

21. And noted by others, such as Richet (1923, pp. 200, 395), Saltmarsh (1938, pp. 66, 104–105), and Sidgwick (1889, p. 344).

22. Exceptions would be those drawing on the monadology of Gottfried Leibniz or Alfred North Whitehead (Marshall, 2015b).

23. At the end of his article, Sheehan uses statistical mechanics to demonstrate the near-zero likelihood that yesterday occurred. “Although this is unpalatable to most of us,” he writes, “it highlights one of several fundamental problems squaring the nature of time with the laws of physics” (p. 106). Indeed.

24. And see, for example, Krohn and Kripal (2018, p. 86).

25. Ossowiecki’s clairvoyance was not simply visual. He “saw a live film, with all the internal and external detail, being aware of what was happening both to the people and inside their minds and souls. . . . It was as if he was seeing everything from a bird’s-eye view, from somewhere in space, although he could not pinpoint his position—but, finally, he found it impossible to find the appropriate words to describe the experience” (Barrington et al., 2005, p. 18). It was an ordinary psychic experience, not an extraordinary visual experience. At the same time, it was at least sometimes clearly not telepathic, as when he was given a message written in invisible ink. He could tell that it was invisible ink, and he could envision the person writing it, but he could not read it or get the words from the mind of the writer, even though that person was with him (pp. 55–57, 144). He was also capable of looking farther into the past, using archaeological objects as gateways to ancient cultures (Schwartz, 1978, pp. 57–107).

26. “quid est ergo tempus? si nemo ex me quaerat, scio; si quaerenti explicare velim, nescio” (Augustine, 1982, p. 264; 2016, p. 216).

27. Heisenberg (1958) addresses the linguistic dilemma faced by physicists describing the quantum world: “The Copenhagen interpretation of quantum theory starts from a paradox. Any experiment in physics, whether it refers to the phenomena of daily life or to atomic events, is to be described in the terms of classical physics. The concepts of classical physics form the language by which we describe the arrangements of our experiments and state the results. We cannot and should not replace these concepts by any others. Still the application of these concepts is limited by the relations of uncertainty. We must keep in mind this limited range of applicability of the classical concepts while using them, but we cannot and should not try to improve them” (p. 44). In the same way, we will be describing aspects of “the future,” “knowing,” and “seeing” for which our common understanding of these concepts have a “limited range of applicability.” Perhaps we will someday be able to improve them.

28. As Whitehead (1929/1985) said, “ultimately nothing rests on authority” (p. 39).

29. The problem of conscious interpretation of subliminal offerings is noted in the presentiment experiments as well, affecting fast-thinking responses less than slow-thinking ones (Mossbridge & Radin, 2018b, pp. 84–85).

30. As Targ (2020) wrote, “Two thousand years ago Patanjali said that we obtain psi data by accessing the akashic records that contain all information past, present and future. One accesses it, he says, by ‘becoming it,’ with a single-pointed focus of attention. These views of the collective unconscious are called by many names, and have been with us for millennia. This picture of psi functioning suggests that the information is always with us and available. It is not a new theory, but it seems to fit the data better than the information transmission model. Can this picture of omnipresent data be tested?”

31. Krohn’s life changed dramatically after her NDE. She had any number of remarkably nonordinary episodes, but she especially had regular precognitive dreams.

32. Paul Marshall (2015a, pp. 48–54; see also 2011) probes the nature of mystically experienced time and the relationship of mystical experience and psi. He also highlights the commonalities of NDEs and mystical experience (2011, p. 8). The nature of mystical time is often confronted by students of psi—for example, LeShan (1974, pp. 36–37).

33. This notion is teased apart in Kelly (2015, pp. 526–530).

34. Although there were fewer cases at greater distances forward or backward in time, those perceptions were no less accurate than were those closer in time. This compares interestingly with Eugene Osty’s (1923) sensitives, whose perceptions of the future—always delineating individual lives—he likened to viewing a distant landscape that shows more detail as you approach it (pp. 174–177).

35. Braude (1982) also mentions this problem with memory (pp. 150–152). This is in contrast to CORT, which present as real memories, not retrocognitive glimpses of the past. And, although NDE reports sometimes include glimpses of future lives, CORT never involve *memories* of future lives parallel to those of past lives, which is perhaps a clue about the arrow of time, the nature of memory, or both. Jenny Cockell (1998), who claimed knowledge of a future life, made the point that her knowledge of the future did not feel cognitively like her past-life memories (p. 106).

Eileen Garrett said, “I do not simply ‘see’ certain future events; I actually appear to ‘live’ them. I find that it is easy for me to pass from the ‘now’ into what may be called the timelessness of the future.” But when she says, “The actual experience of precognition is difficult to convey because it so closely resembles an actual current happening” (Osborn, 1961, p. 8), she is comparing precognition not to an ordinary, everyday experience but to a psychic experience of a concurrent event.

36. It is an interesting aside that precognitive personalities, such as Osty’s sensitives or Ossowiecki, can rarely apply their ability to their own lives (Barrington et al., 2005, p. 19; Osty, 1923, p. 186). And yet most spontaneous precognitive episodes, which happen to otherwise psychologically unexceptional people, are personal.

37. Marshall (2015a, pp. 50–51; 2005, p. 139).

38. Two areas of psi research reveal another interesting temporal conundrum. The CORT collected by Ian Stevenson, Jim Tucker, Erlendur Haraldsson, Antonia Mills, and others (surveyed in Matlock, 2019) present situations where memories—or personalities, depending on the case or its interpretation—are available for days, months, or years, waiting to be tapped or reincarnated. Yet in NDEs, experiencers commonly encounter deceased personalities, some of them long departed and others newly un-minted. If we are to take postmortem survival of personality seriously, as these and other phenomena indicate, how can we have it both ways? Do some individuals wait around to welcome loved ones after death while others reinsert themselves into the land of the living? Or, as NDE researcher Bruce Greyson mused (personal communication), does time mean something quite different in that incorporeal realm? That seems perfectly reasonable, given the reports of mystics, near-death experiencers, and the occasional CORT subject—travelers who say they have, *contra Hamlet*, returned from that “undiscover’d country”—and the demands of pre- and retrocognition.

39. There is a long tradition of psi phenomena linked to psychedelic use (e.g., Kelly & Grosso, 2007, pp. 542–553; Luke, 2012, 2017; Luke & Kittenis, 2005; Tart, 1993).

40. The arrow of time as a result of irreversible processes and thermodynamics is commonly known and discussed. Barušs and Mossbridge (2017, pp. 53–81) discuss it and time in general in the light of psi phenomena.

41. I am aware of only three reports, all involving LSD. “What she saw—not thought or contemplated but saw, such was LSD’s curious power—was the flower fully open up, go through its cycle and wither, but also she watched the flower reverse this same flow, recovering from its dried state, re-flowering and returning to being a bud. She could see it go in both directions, forward and backward in time, dancing its own birth and its own death” (Fadiman, 2008, p. 93; see also bigolrandyorton, 2020; Spiderman, 2019). There are doubtless others, but I have never encountered one that did not spring from psychedelic use. From reading the accounts, it seems safe to assume that the individuals’ metabolisms did not reverse—only their perceptions. Even so, there they are.

42. Although, in their discussion of NDE life reviews, Barušs and Mossbridge (2017, p. 72) say that “like film, a life review can run forward or backward,” to my knowledge there is no report of a literally backward experience in the NDE literature. This also says something about the limited role of culture in an NDE,

since a large proportion of the Western world has watched visual recordings played in reverse and it wouldn't be unreasonable to expect someone, somewhere, to have reported something similar in an NDE. But they never have. Osborn (1961, pp. 201–202) observes this as well.

43. Normative statements—“should” or “ought to”—are pernicious in psychical research, since we lack a fundamental understanding of what is going on or at least a way to discuss it cogently and meaningfully with ordinary language. In this case, however, because it virtually *never* happens and there are so many different extraordinary temporal perceptions from psychics, mystics, and others, it seems a fair question.

44. Kelly, Crabtree, and Marshall (2015) and several chapters in this volume.

45. Braud (2002) wrote, “Alfred North Whitehead . . . suggested that the European philosophical tradition consisted of a series of footnotes to Plato. It might not be inappropriate to suggest that much within the traditions of psychical research and of explorations of the unconscious, since 1901, is but a series of footnotes to Myers and Du Prel” (p. 16n1).

46. Causality with an eye to precognition is explored nicely by Radin (2006b, pp. 391–398). Like time and free will, the literature on causality is vast.

47. Although it is true that relativity abolished absolute time, in the sense that two events perceived as simultaneous by one observer might not be perceived that way by another and that two events might even be perceived in reverse order by different observers, the events *must be spatially separated*. That is, if one observer watches someone (Wile E. Coyote, say) light the fuse on a stick of dynamite and then sees the consequent explosion, that order of events will always be preserved for any observer.

48. As physicist Henry Margenau noted earlier. Physicists argue vigorously about time but always in the absence of precognition. Most of them accept the notion of a static, determinate block universe, but that does not mean they think there is any way to perceive a future state of that universe. And those who aren't acolytes of the block universe make statements about “the reality of time” like “The future is not now real and there can be no definite facts of the matter about the future” (Unger & Smolin, 2015, p. 416), which does not comport well with precognition.

49. Mary Hesse (1970), a philosopher of science, observed that “most of those who attempt to theorise in parapsychology have long reached the conclusion that theories of physical type are unhelpful and that some new explanatory concepts are required. But new explanatory concepts are always drawn by analogy from some other conceptual system, and since physics has provided the comprehensive framework for so long, it is difficult to know where else to look” (p. 302).

50. Carr (2015a, 2015b); Stapp (2007, 2015).

51. The question of causality can look quite different outside the Western tradition. “The general tendency in China has been to think of things as being connected not in linear chains of cause and effect, but in networks of mutual dependencies and reciprocal interrelatedness” (Marchal & Wenzel, 2017, p. 384).

52. Even for presentiment, “one problem with a quantum biological explanation . . . is that retrocausal effects on the *order of seconds* would have to be explainable via quantum processes, and we know of no evidence so far that these effects can occur at that time scale” (Mossbridge et al., 2014, p. 5).

53. From a slightly different perspective: “The future necessarily only has meaning in relation to human beings” (Osborn, 1961, p. 80). More provocatively, Shanon (2001a; see also 2001b) says that “psychological time is defined in terms of events. As such, human time is intrinsically semantic” (p. 41). The importance of meaning is tackled in nearly every serious approach to psi, as can be seen in the many varied models in Kelly et al. (2015) and May and Marwaha (2015).

54. The results of the presentiment experiments have lent themselves to some very interesting analyses (e.g., Radin, 2006b) that may be due to the specificity of the events. And Radin makes retrocausality seem plausible for presentiment in that same article.

55. This has been a defining characteristic of laboratory psi, although there have been exceptional cases in which the subject has been able to specify correct calls (Palmer, 1978, pp. 177–180).

56. Whitehead’s process philosophy might also be described this way.

57. There is no monolithic “Eastern” philosophy, of course, but there are tendencies and streams that are far less pronounced in the West (see, e.g., the analysis of Buddhist causality in Kalupahana, 1975). This is, after all, the reason so many psychological researchers have explored Eastern thought, both professionally and personally. And “an ontology of states rather than things” is perhaps why philosophically inclined theorists of quantum physics—a science of states rather than things—have found it so attractive.

58. Magidor (2019).

59. Although in his foundational work on synchronicity (Jung, 1973) he included several trivial coincidences as evidential, he generally took it to mean more, involving fundamental psychological entities he called “archetypes” (Jung & Main, 1999).

60. Primas (2017) notes that “a comprehensive understanding of the notion of time is impossible within the framework of Boolean [true/false] logic alone” (p. 3) and that “while classical physics is based on propositions that are either true or false, the non-Boolean logic of quantum physics leads to new phenomena such as complementarity, nonlocality and entanglement” (p. 93). Nevertheless, a philosopher writing in May and Marwaha (2015) on “ESP, causation, and the possibility of precognition” (Corry, 2015) can ignore that and insist that the law of noncontradiction is still a fundamental property of the world (p. 122). I am not suggesting that we abandon Boolean logic. We live in a world that seems subject to binary logic locally, just not as a whole, in the same way that geometry on Earth can be treated locally as if the world were flat, whereas on a large scale it can’t (Primas, 2007, p. 16).

61. It is difficult but important for those of us not philosophers to realize the depth and extent of philosophical arguments. For example, the law of noncontradiction—“no proposition is both true and false”—seems straightforward. And yet “fixing the precise formulation is itself a topic of debate” (Priest et al., 2018). Such uncertainty in what to the layperson seems common sense is to be found everywhere in browsing the professional literature, such as the authoritative and readily available (online) *Stanford Encyclopedia of Philosophy*.

62. See also Barrington et al. (2005); Kastrup (2019, pp. 196–197); Kastrup, Stapp, and Kafatos (2018); and McMoneagle and May (2014). The notion of a “higher,” shared

mind has been postulated often. Early researchers—Myers (1895b, pp. 585–593) and Sidgwick (1962, pp. 419–423)—found information transmission models inadequate, and the idea is also examined critically in Kelly (2015, pp. 518–522). Russell Targ (2012) concluded “that psi phenomena *are not a result of an energetic transmission*” (p. 209), and Alan Gauld (1976) said, “The knowledge is not ‘acquired,’ the information does not ‘arrive.’ The knowledge, so to speak, ‘happens’” (p. 36).

63. By attention and intention, I do not mean to imply conscious effort. Osty’s (1923) sensitives were most often in a hypnotic state, and successful remote viewers usually took time to enter a semi-meditative frame of mind before a session (Targ, 2012). Spontaneous cases arise most often during sleep or rest. None of these statements is absolute; there are exceptions to each. But they are generally true, illuminating something again and again, if we just knew enough about our own minds to understand it.

64. Boswell (1816, p. 318).

65. James and James (1926, p. 147). Like Samuel Johnson a century before, the twenty-eight-year-old James was reacting to a physical universe that seemed to have no room for uncaused events like freely willed human actions.

66. For a concise discussion of free will in relation to precognition, see Kelly (2015, pp. 526–530).

67. We must also acknowledge the prophetic visions concerning the larger world that occur with NDEs, many apocalyptic and almost all utterly wrong (Grey, 1986, pp. 122–133). Osty (1923), who declared with “absolute certainty that there are human beings who can foretell the future of other persons,” was not at all sure about their ability to see “the future in general” (p. 110). He noted that when a sensitive thinks “himself also able to foretell future events and life in general . . . either nothing answers to the effort or the subconscious mind begins to work and builds up a romance on data supplied by the conscious mind. This may chance to agree with the event, but more often proves mistaken” (p. 225). In other words, general forecasting of impersonal events is rarely accurate (see McMoneagle, 1998, pp. 137–275).

68. Benny Shanon (2001a) related an altered-state experience: “In front of me I saw the space of all possibilities. The possibilities were there like objects in physical space. Choosing, I realized, is tantamount to the taking of a particular path in this space. It does not, however, consist in the generation of intrinsically new states of affairs. Further, it should be noted that while traveling in the space of possibilities takes time, the possibilities themselves are there, given in an ever-present atemporal space. Thus, I concluded, there is no contradiction between determinism and free will. With this vision, I felt that an issue that had puzzled me for a long time was resolved” (p. 47).

69. And, like time, free will is the subject of magisterial philosophical collections that make no mention of precognition (Timpe, 2017). Free will has a history in Eastern philosophy as well, but it is not nearly as prominent. “Broadly speaking, many Chinese and other East Asians do not share the Western belief in free will” (Marchal & Wenzel, 2017, p. 386).

70. Citing Wolfgang Prinz. See also Harris (2012); O’Connor and Franklin (2020); and Sapolsky (2017). There are philosophical arguments that fall under

“compatibilism” that would like to have free will and determinism coexist, but naturally they too are highly contentious, and they almost universally accept physical determinism (McKenna & Coates, 2020). See also Kastrup (2020).

71. This does not open the door to individuals asserting their intuitions as hard-core common sense. Whitehead said, “It is a disease of philosophy when it is . . . merely a reflection of the temperamental presuppositions of exceptional personalities” (Griffin, 1998, p. 20). It should also be noted that when Marchal and Wenzel (2017) declared (above) that “many Chinese and other East Asians do not share the Western belief in free will” (p. 386), they were speaking principally of philosophers. Griffin here chooses deliberately to include “all human beings.” Although philosophers reflect their cultures in many ways, I cannot say whether average thoughtful East Asians feel that free will falls under hard-core common sense—but if they don’t, then of course the relationship of free will and precognition isn’t problematic.

72. Sprigge (1992) makes a careful case for a determinate world, but it is a strictly theoretical case. Pre- and retrocognition, which would help the argument, do not appear.

73. For example, Crowe (1868, pp. 42–43), Miss X (1896, p. 59), and Stead (1921, 164–165).

74. James is referring here to the work and members of the Society for Psychical Research.

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II

FURTHER THEORETICAL HORIZONS

MYSTICAL EXPERIENCE AND THE SCOPE OF C. G. JUNG'S HOLISM

Roderick Main

In February 1944, in his sixty-ninth year, Carl Gustav Jung (1875–1961) broke his foot and, while laid up in hospital, suffered a heart attack. He then had a near-death experience during which he found himself floating a thousand miles above the earth (over Ceylon, now Sri Lanka). He underwent a painful process in which he was stripped of all his earthly attachments and was about to enter a stone temple on a meteorite where he would discover the meaning of his life, when he was called back to the earth by the spirit of his doctor (Jung, 1963/1995, pp. 320–324). Over several nights while recovering in hospital, he experienced a series of further visions in which he felt himself to be “in the womb of the universe” (p. 324) and witnessed, participated in, or in some way “was” the “mystery of the conjunction,” expressed in Jewish mystical (Kabbalistic) terms as the marriage of Tiphereth and Malchuth or Rabbi Simon ben Jochai’s wedding in the afterlife, in Christian terms as the “Marriage of the Lamb,” and in Greek mythological terms as the consummation of the sacred marriage (*hierosgamos*) of Zeus and Hera (p. 325). He described the visions as “extremely strange” (p. 320), “the most tremendous things I have ever experienced” (p. 326), and “utterly real” (p. 327).¹

From his student days in the late 1890s until his death in 1961, Jung experienced, observed, and studied an astonishing range of paranormal and mystical phenomena (Main, 1997, 2012). His personal experiences included apparently telepathic, clairvoyant, and precognitive dreams and fantasies (Jung, 1963/1995, pp. 159–160, 200–201, 333–335); psychokinetic and poltergeist activity (pp. 125–127, 178–179); apparitions and hauntings (pp. 215–216; 1950/1977d); meaningful coincidences (1952/1969i, paras. 843–845; 1963/1995, pp. 207–208); altered states of consciousness involving both spontaneous and induced visions (2009); and the above-described

near-death experience and accompanying mystical visions (1963/1995, pp. 320–329). As a psychiatrist and psychotherapist, Jung heard accounts of similar experiences from his patients (1952/1969i, para. 816). Through attending séances, he witnessed the apparent possession of mediums and the materialization of spirits (1902/1957; 1973, pp. 100, 511). And in his last decade, he assiduously collected documents about the then emerging phenomenon of UFOs (1954/1977g, para. 1431; 1958/1970b). Throughout his life, he read extensively in the literature of psychical research and parapsychology (1952/1969i, paras. 830–839; 1963/1995, p. 120; 1973, p. 166), and he carried out parapsychological experiments of his own, including laboratory tests of mediums (1905/1977h) and collecting and statistically analyzing astrological data (1952/1969i, paras. 872–915). Based on his experiences, observations, and studies, he published three books on such phenomena (1902/1957, 1952/1969i, 1958/1970b) as well as numerous shorter papers.²

Jung's openness to extraordinary experiences profoundly influenced the development of his psychological theory not only at the outset of his career but also at key points throughout it (Charet, 1993; Main, 1997, pp. 1–44). His openness also consolidated his opposition to materialism (1916/1948/1969b, para. 529; 1952/1969i, para. 960; 1955–1956/1970a, para. 763), to narrowly rationalistic approaches to science (1963/1995, p. 336), and to the pervasive cultural condition of disenchantment (Weber, 1919/1946, pp. 139, 155), or, as he called it, the “despiritualization” (Jung, 1938/1940/1969g, paras. 140, 141) or “desacralization” of the world (McGuire & Hull, 1978, p. 230; see Main, 2012, pp. 25–27)—all of which, he felt, were incompatible with the kinds of data he had encountered. The pivotal concept that emerged specifically from Jung's engagement with these topics and issues was synchronicity, a principle of acausal connection through meaning (1952/1969i), which he then deployed to establish the reality, explain the dynamics, and, not least, interpret the meaning of extraordinary experiences (Main, 1997, 2004, 2007, 2012).

THE RECALCITRANT CASE OF INTROVERTIVE MYSTICAL EXPERIENCE

About one extraordinary phenomenon, however, Jung long remained skeptical: the claimed egoless and contentless awareness of introvertive mysticism (1939/1968e, para. 320; 1939/1954/1969e, paras. 774, 817–818). This may appear to be a small limitation in an otherwise strikingly open system of thought. But it does seemingly put Jung at odds with an extensive body of empirical data about mysticism, including many impressive first-person accounts (Stace, 1960/1973, pp. 88–111), and in *Irreducible Mind* (Kelly et al.,

2007), Edward Kelly and Michael Grosso (2007) understandably identify this limitation as compromising the adequacy of Jung's theoretical model when it comes to accounting for mystical experiences (pp. 555–557).

The term “introvertive mysticism” is taken from Walter Stace's classic study *Mysticism and Philosophy* (1960/1973). Stace identifies two main types of mystical experience: extrovertive (“outward-turning”) and introvertive (“inward-turning”). “The essential difference between them,” he writes, “is that the extrovertive experience looks outward through the senses, while the introvertive looks inward into the mind” (p. 61). He continues,

Both culminate in the perception of an ultimate Unity—what Plotinus called the One—with which the perceiver realizes his own union or even identity. But the extrovertive mystic, using his physical senses, perceives the multiplicity of external material objects—the sea, the sky, the houses, the trees—mystically transfigured so that the One, or the Unity, shines through them. The introvertive mystic, on the contrary, seeks by deliberately shutting off the senses, by obliterating from consciousness the entire multiplicity of sensations, images, and thoughts, to plunge into the depths of his own ego. There, in that darkness and silence, he alleges that he perceives the One—and is united with it—not as a Unity seen through a multiplicity (as in the extrovertive experience), but as the wholly naked One devoid of any plurality whatever. (pp. 61–62)

Stace himself considered introvertive mystical experiences to be a higher type than extrovertive mystical experiences (pp. 132–133), the latter being “a sort of incomplete version of the completeness realized in the introvertive kind” (p. 133). As Paul Marshall (2005) has highlighted, this ranking is by no means universally agreed on among experiencers and theorists of mysticism.³ He discusses the case of Robert Forman, for example, who, drawing on the framework of Transcendental Meditation, and hence ultimately of Upanishadic thought (pp. 170–172), presents a sequence of mystical development in which the introvertive state, referred to as a pure consciousness event, is a lesser attainment (p. 167). More advanced attainments include a dualistic mystical state in which pure consciousness is experienced “alongside but separately from ordinary awareness of objects” (p. 167) and then, as a further development, a unitive mystical state in which “consciousness is no longer separate from its objects” (p. 168). This unitive mystical state resembles Stace's extrovertive mystical experience. But because it unites consciousness and the world rather than keeps them apart, it is considered more unitary, and hence more advanced, than the pure consciousness event, which resembles Stace's introvertive mystical experience (p. 168). However, whether more or less advanced, introvertive mystical states are still widely reported to occur, and it would be a serious limitation if Jung's theory were unable to give a satisfactory account of them.

Kelly and Grosso note two respects in which Jung's psychological model seems inadequate to account for introvertive mystical experience. First, they challenge Jung's claim that mystical experiences are always archetypal. This cannot be true of all mystical experiences, they argue, "for archetypes only reach overt expression in the form of *images*, broadly construed, and as maintained by Stace and others the innermost core of mystical experience unfolds in a region beyond images and all other distinctive mental particulars" (Kelly & Grosso, 2007, p. 557). This characterization of archetypes can indeed be readily supported with reference to Jung—for example, when he writes, "What we mean by 'archetype' is in itself irrepresentable, but has effects which make visualizations of it possible, namely, the archetypal images and ideas" (1947/1954/1969c, para. 417).

Second and more seriously, Kelly and Grosso (2007) argue that Jung was "systematically unable to come fully to grips with introvertive mystical experiences" because of his conviction that "the *ego* is the primary bearer of consciousness" (p. 557). For Jung, as Kelly and Grosso understand him,

disappearance of the ordinary conscious ego during a numinous encounter with the collective unconscious can only mean that the conscious ego has been flooded, or contaminated, or engulfed by the inherently dark contents of the unknown part of the psyche. As a result, consciousness itself supposedly dims or contracts, ultimately to some sort of void, nothingness, or state of egoless unconsciousness. . . . This kind of description of mystical states . . . , which follows from Jung's strong identification of consciousness with the ordinary ego, is flatly contradicted by the unanimous testimony of great mystics of all times and places that their highest states are not dim or *unconscious*, but if anything "*superconscious*." (p. 557)

There is also ample evidence in Jung to support this characterization of his position. Contrasting Western and Eastern styles of thinking, Jung (1939/1954/1969e) wrote in his "Psychological Commentary on 'The Tibetan Book of the Great Liberation,'"

To us, consciousness is inconceivable without an ego; it is equated with the relation of contents to an ego. If there is no ego there is nobody to be conscious of anything. The ego is therefore indispensable to the conscious process. The Eastern mind, however, has no difficulty in conceiving of a consciousness without an ego. Consciousness is deemed capable of transcending its ego condition; indeed, in its "higher" forms, the ego disappears altogether. Such an ego-less mental condition can only be unconscious to us, for the simple reason that there would be nobody to witness it. I do not doubt the existence of mental states transcending consciousness. But they lose their consciousness to exactly the same

degree that they transcend consciousness. I cannot imagine a conscious mental state that does not relate to a subject, that is, to an ego. The ego may be depotentiated—divested, for instance, of its awareness of the body—but so long as there is awareness of something, there must be somebody who is aware. (para. 774)

Later in the same paper, Jung describes yoga, “India’s most important exercise,” as “an immersion in what we would call an unconscious state” (para. 911). “It makes no difference,” he asserts elsewhere, “whether [the yogis] call our unconscious a ‘universal consciousness’; the fact remains that in their case the unconscious has swallowed up ego-consciousness” (1939/1968e, para. 520). Jung acknowledges that “a correct application of the methods described in the Pāli Canon or in the *Yoga-sūtra* [can induce] a remarkable extension of consciousness” but immediately adds that “with increasing extension, the contents of consciousness lose in clarity of detail” such that “consciousness becomes all-embracing, but nebulous; an infinite number of things merge into an indefinite whole, a state in which subject and object are almost completely identical” (para. 520).

Kelly and Grosso (2007) draw a contrast between Jung’s model and that of Frederic Myers:

The ingredient crucially absent from the Jungian model . . . is precisely Myers’s central theoretical move, his repudiation of that identification [of consciousness with the ordinary ego] in favor of his [Myers’s] own core conception of the Subliminal Self—“a more comprehensive consciousness, a profounder faculty, which for the most part remains potential only,” but which expresses itself in greater or lesser degree as a function of fluctuating conditions in the organism. (pp. 557–558, citing Myers, 1903, Vol. 1, p. 12)

Later, in *Beyond Physicalism* (Kelly, Crabtree, & Marshall, 2015), Kelly (2015) acknowledges that in fact “Jung makes a structurally equivalent distinction between ego and Self [to that made by Myers]” (p. 545n20). However, the self that Jung postulates is still inferior to that postulated by Myers (and similarly by William James) in terms of its ability to account for mystical experiences. Writes Kelly,

Jung’s Self . . . lies within the collective unconscious, which later became the *unus mundus* . . . and unlike the Myers–James Subliminal Self it is inherently dark, unconscious, and inaccessible except by way of its symbolic products. Allegiance to this conception caused Jung to describe mystical experiences consistently, and in flagrant contradiction with the first-person reports, as a dimming or darkening of everyday consciousness as it becomes flooded or overwhelmed by unconscious contents. (p. 545n20)

The above criticisms of Jung's model are serious ones, not least as they have been made by attentive readers of Jung who are generally very favorable about his thought (Kelly & Grosso, 2007, p. 555; Kelly et al., 2007, pp. 334, 479, 481; Kelly et al., 2015, pp. 195–226). Similar criticisms have also occurred to other sympathetic scholars examining the ability of Jung's psychology to account for mystical states, especially as articulated in Indian philosophy (Coward, 1985; Kakar, 1994, pp. 268–272; Schipke, 2019; Whitney, 2017). In this chapter, I assess to what extent these criticisms might be answerable. I do so in three stages. First, I look at Jung's own mystical visions experienced late in his life, which, I argue, contain elements of introvertive mysticism. Second, I consider how Jung's mature psychological model might be able to account theoretically for introvertive mystical experiences. I attend in particular to Jung's characterizations of the archetype of the self as well as to some late formulations of the relationship between the ego and the self that suggest how experiencing "pure consciousness" might after all be compatible with Jung's claim that consciousness depends on the ego. Third, despite Jung's own reservations about philosophy, I argue that the apparent contradictions in his theorizing of mysticism can be resolved—or at least eased—by viewing his thought as underpinned by an implicit metaphysics of panentheism.

JUNG'S MYSTICAL NEAR-DEATH EXPERIENCE OF 1944

Before looking at Jung's mystical near-death experience in more detail, it will be helpful to clarify further Stace's distinction between extrovertive and introvertive mystical experiences as well as to supplement it with a more recent taxonomy. One of Stace's main aims in *Mysticism and Philosophy* was to identify a common core of mystical experiences. Accordingly, most of the specific features he identifies of extrovertive and introvertive experiences are shared. Thus, both types are characterized by a sense of objectivity or reality; by blessedness, peace, and similar strong positive emotions; by a feeling of the holy, sacred, or divine; by paradoxicality; and by ineffability (1960/1973, pp. 131–132; Kelly & Grosso, 2007, p. 504). However, as already noted, the two types differ in how they characterize the experience of unity, which, according to Stace, represents "the very inner essence of all mystical experience" and is deemed by mystics to be "in some sense ultimate and basic to the world" (1960/1973, p. 132). In extrovertive mysticism, the unity is experienced as a "Unifying Vision" in which "all things are One" and there is "the more concrete apprehension of the One as an inner subjectivity, or life, in all things" (p. 131).⁴ In introvertive mysti-

cism, by contrast, the unity is experienced as “Unitary Consciousness; the One, the Void; pure consciousness” and as “nonspatial” and “nontemporal” (p. 131).⁵ Kelly and Grosso also highlight what is in effect a third quality of introvertive mystical experiences implied by Stace (1960/1973, pp. 112–123)—namely, a radical transformation from an ordinary sense of self to “a vastly amplified sense of self . . . that almost inevitably experiences itself as in a state of direct contact, or union, or identity with some reality variably conceived as a Universal Self, the One, the Absolute, the Ground of Being, or God” (Kelly & Grosso, 2007, pp. 507–508).

In order to avoid some of the confusions generated by Stace's claim that extrovertive experience is, as the term suggests, “always directed ‘outward’ through the sense organs,” Marshall (2019, p. 18) offers a slightly more differentiated taxonomy that will be helpful when looking at Jung's experiences. He distinguishes between what he calls “this-worldly mystical experience,” characterized as “mystical experience of the natural world or some region or content of it, whether or not experienced through the familiar senses” (p. 18); “other-worldly mystical experience,” characterized as “mystical experience of a world or some of its contents (e.g., places, beings, objects) fundamentally distinct from our familiar universe” (p. 19); and “no-worldly mystical experience,” characterized as “mystical experience of something beyond all worlds, this-worldly and other-worldly, and all their contents” (p. 19). Marshall also highlights the possibility of “mixed experiences” (p. 20), which may be composed of elements or phases that are variously this-worldly, other-worldly, and no-worldly.

In the chapter-long account Jung gave of his mystical experiences in *Memories, Dreams, Reflections* (1963/1995, pp. 320–329), it is not hard to detect all the characteristics that introvertive mysticism shares with extrovertive mysticism in Stace's classification.⁶ About the objectivity and reality of his experience, Jung was in no doubt: “It was not a product of imagination,” he wrote. “The visions and experiences were utterly real; there was nothing subjective about them; they all had a quality of absolute objectivity” (pp. 326–327). He was also explicit about the strong positive emotion associated with the experiences: “It was as if I were in an ecstasy . . . filled with the highest possible feeling of happiness” (pp. 324–325). That there was, more specifically, a feeling of the sacred is indicated by Jung's statement that, at the time of the visions, “everything around [him] seemed enchanted” (p. 325) and “there was a *pneuma* of inexpressible sanctity in the [hospital] room,” which “had a magical atmosphere” (p. 326). The paradoxicality that Stace noted as another typical feature of mystical experiences was expressed both by Jung's statement that his being stripped of his attachments gave him “a feeling of extreme poverty, but at the same time of great fullness” (p. 322) and by his

claim that, within the experience, “the only thing that feeling could grasp would be a sum, an iridescent whole containing all at once expectation of a beginning, surprise at what is now happening, and satisfaction or disappointment with the result of what happened” (p. 327). Finally, Jung acknowledged the ineffability of his experience: he reported thinking during the experience itself that “this cannot be described; it is far too wonderful!” (p. 325), and he reflected afterward that “it is impossible to convey the beauty and intensity of emotion during those visions” (p. 326).

Jung’s mystical visions were for the most part not contentless and for that reason would mostly fall into Stace’s class of extrovertive experiences. However, some parts of the visions were almost certainly not perceived, as Stace stipulates, “using [the] physical senses” (1960/1973, p. 61). This is where Marshall’s distinction between this-worldly and other-worldly experiences becomes useful. Some elements of Jung’s visions definitely involved his actual perceptual world, albeit transfigured, such as when he saw the hospital nurse who brought him his food as “an old Jewish woman, much older than she actually was, . . . preparing [for him] ritual kosher dishes” (1963/1995, p. 325). But other elements, such as his vision of being suspended in space and then approaching the stone temple on the meteorite (pp. 320–323), seeing the spirit of his doctor floating toward him “in his primal form as a *basileus* of Kos” (pp. 322–323), and, above all, the Jewish, Christian, and ancient Greek visions of the mystic marriage (p. 325) are better viewed as other-worldly. For in these parts of the experience, Jung appears to have been seeing a visionary reality that was drawing on memories of sensory experience rather than a sensory reality that had been transfigured.

Most crucial, though, for addressing the claim that Jung’s model cannot adequately account for introvertive mystical experience is the extent to which his visions may themselves include elements that Stace considered unique to such experience. Considering first the qualities of being nonspatial and nontemporal (Stace, 1960/1973, p. 131), we find various approximations to these in the form of altered spatiality and altered temporality. For example, despite Jung’s use of numerous and often quite precise spatial and geographical references—“high up in space,” “far below my feet,” “Ceylon,” “the subcontinent of India,” “standing with my back to the Indian Ocean, as it were,” and so on (1963/1995, pp. 320–321)—it seems clear that most of his experience did not take place in an ordinary spatial environment. Nor, at times, did he have a normal spatial relationship to the content of his visions. Of his vision of “the marriage of Malchuth and Tifereth,” for instance, he writes, “I do not know exactly what part I played in it. At bottom it was myself; I was the marriage” (p. 325); more generally, quoting Part Two of Goethe’s *Faust*, he describes how he “floated in a state of purest

bliss, 'thronged round with images of all creation'" (p. 326). However, such altered spatiality is still far from being nonspatial. With Jung's descriptions of altered temporality, the approximation to being completely nontemporal gets much closer: "We shy away from the word 'eternal,'" he writes, "but I can describe the experience only as the ecstasy of a non-temporal state in which present, past, and future are one. Everything that happens in time had been brought together into a concrete whole. Nothing was distributed over time, nothing could be measured by temporal concepts" (p. 327). Even here, though, despite Jung's use of the word "non-temporal," a question mark remains over whether he is referring to complete transcendence of time, as Stace seems to require for introvertive mysticism, or to temporal inclusiveness, in which all time comes together, a kind of experience that can also be found in content-rich extrovertive mysticism.⁷

Jung's experience also evinces various approximations to the kind of radical transformation from an ordinary sense of self to the "vastly amplified sense of self" that characterizes the unitary consciousness achieved in introvertive mystical experience (Kelly & Grosso, 2007, p. 507; Marshall, 2005, p. 55), an experience, in fact, that for Stace (1960/1973) implies that "the individual self . . . must lose its individuality, cease to be a separate individual, and lose its identity because lost or merged in the One, or Absolute, or God" (p. 111). Jung (1963/1995) reports that, during his vision of floating above the earth, he had "the feeling that everything was being sloughed away; everything I aimed at or wished for or thought, the whole phantasmagoria of earthly existence, fell away or was stripped from me—an extremely painful process. Nevertheless, something remained . . . I consisted of my own history, and I felt with great certainty: this is what I am" (p. 321). Here Jung attains a greater or more essential self but still seems to have individuality. Later in his account, though, he does seem to be attempting to articulate an experience not unlike Stace's merger with the One, when he describes how he felt that his identity was "interwoven into an indescribable whole" that he was yet able to observe "with complete objectivity" (p. 327).

However, we find the strongest indication of introvertive mystical experience in Jung's account when we turn to Stace's remaining and most important defining characteristic of such experiences—that is, their being experiences of "Unitary Consciousness; the One, the Void; pure consciousness" (1960/1973, p. 131). For Stace, this is in fact "the one basic, essential, nuclear characteristic, from which most of the others inevitably follow" (p. 110). The characteristic does not appear directly in the greater part of Jung's account, for his experiences were primarily visionary and ipso facto not void or contentless. However, there were repeated moments when he did seem to enter into a state describable in terms of Stace's nuclear characteristic. Jung

(1963/1995) relates how while in the hospital, he would wake up each night around midnight “in an utterly transformed state” (p. 324). “I felt as though I were floating in space,” he writes, “as though I were safe in the womb of the universe—in a tremendous void, but filled with the highest possible feeling of happiness” (p. 324). This womblike void, paradoxically “filled” with happiness, precisely evokes the concept of the “vacuum-plenum” (“emptiness-fullness”) that Stace uses to characterize the contentless nature of introvertive mystical experience (1960/1973, pp. 161–178; Kelly & Grosso, 2007, p. 507). As Stace notes, an experience of the void is necessarily nonspatial and nontemporal and also presupposes complete loss or merger of individuality in the One; it is, in Jung’s apt expression, “an utterly transformed state.”

In the conclusion of their discussion of the problem of a universal core of mystical experience, Kelly and Grosso (2007) suggest that the “extreme developments” of introvertive mystical experience may be “most concisely encapsulated by the famous Vedic formula ‘Sat–Chit–Ananda’—pure being or existence, pure awareness or consciousness, and pure bliss, amplified without limit” (p. 510). We can note, finally, that each part of this formula is reflected in Jung’s (1963/1995) account: he felt that he “existed in an objective form” (p. 322), he accessed “objective cognition” (p. 328), and he was “filled with . . . eternal bliss” (pp. 324–325).⁸

Jung’s mystical experiences of 1944 were far from being his only visionary experiences. Above all, the earlier visions he experienced between 1913 and 1916 and recorded and reflected on in his now published *Red Book* (2009) were also remarkable in many ways and had a seminal influence on his subsequent theoretical and practical work.⁹ However, it is only in the account of his 1944 experiences that we find strong indications of Jung actually having experienced introvertive mystical states. This may be significant inasmuch as all the passages cited earlier in which he can be construed as denying the possibility of introvertive mystical experiences date from before 1944.¹⁰ That Jung’s 1944 visions and experiences may have forced him to reconsider his theoretical preconceptions on this point is also suggested by his admission that, prior to his visions, he “would never have imagined any such experience was possible” (1963/1995, pp. 326–327).

EXPERIENCE OF THE SELF

While there are thus indications that Jung may have experienced introvertive mystical states, the question remains whether his psychological model is able satisfactorily to account for such states or is, as Kelly and Grosso imply, irremediably hamstrung by its assumptions that consciousness depends on the ego

and that we can know archetypes only as images. In addressing this question, I shall refer mainly to Jung's writings that were published after 1944, which include some of his most important works: "The Psychology of the Transference" (1946/1966a), "On the Nature of the Psyche" (1947/1954/1969c), *Aion* (1951/1968b), "Answer to Job" (1952/1969a), "Synchronicity: An Acausal Connecting Principle" (1952/1969i), and *Mysterium Coniunctionis* (1955–1956/1970a). Jung stated that his mystical near-death visions had given him "the courage to undertake new formulations" (1963/1995, p. 328). These new formulations—which included richer articulations of the archetype of the self and its relations to the ego, of the distinction between the archetype as such and the archetypal image, and of the concepts of synchronicity and unitary reality (the *unus mundus*)—are natural places to look for resources within Jung's psychological model that might enable it to account for introverted mystical states. Before directly addressing this issue, though, it may be helpful to provide a very brief overview of Jung's psychological model.

Jung (1963/1995) described the objectivity he experienced in his visions as "part of a completed individuation" (p. 328). Individuation is the core process of his psychology and signifies the process of becoming a unique self through the ongoing synthesis of consciousness and the unconscious. Jung articulated this process in a variety of ways, of which the following is a summary (based mainly on Jung, 1928/1966b and 1951/1968b, paras. 1–67).¹¹ For Jung, psychological development begins in childhood and early adulthood by one's developing and strengthening an ego in order to deal with the forces that assail one from the social world without and the psychic world within. Such an ego is inevitably one-sided, having been forced by the pressures of its inner and outer environments to develop and thereby make conscious some potentialities at the expense of others that remain unconscious. In Jung's understanding, however, the unconscious has an innate drive toward expressing itself as a whole. An opposition is therefore set up between consciousness, centered on the ego, and the unconscious. From the unconscious, contents emerge spontaneously—for example, in the form of dreams, fantasies, symptoms, and acausal convergences of events—in order to compensate and regulate consciousness in the interests of greater overall realization of the unconscious. This process of encounter between the ego and the unconscious, which can be facilitated by psychotherapy and the deployment of techniques such as dream interpretation, transference analysis, and active imagination, is marked by the appearance of certain typical themes or problems that demand to be integrated and made conscious. Such typical themes, problems, or "archetypes" needing to be encountered and integrated with the ego include above all the dark side of one's personality (the "shadow") and the contrasexual element of one's personality (the "anima" or "animus"). When

a sufficient level of integration has been achieved between ego-consciousness and these archetypes, there can emerge a new center of the psyche, a center no longer only of consciousness, as was the ego, but of both consciousness and the unconscious. This new center is what Jung called the self. The self is potentially there from the beginning as a kind of unconscious wholeness, but the aim of individuation is to realize it consciously. This is an extremely arduous, lifelong task, and it is full of pitfalls, not least the dangers of either the ego becoming excessively assimilated by the self or the self becoming excessively assimilated by the ego, both of which would result in pathological conditions, such as psychosis or inflation. "Conscious wholeness," Jung wrote more favorably, "consists in a successful union of ego and self, so that both preserve their intrinsic qualities" (1947/1954/1969c, para. 430n128).

The Archetype of Wholeness

The centerpiece of Jung's psychological model as well as the key to appreciating what he has to say about mysticism is the archetype of the self. He designated the self as "the archetype of orientation and meaning" (1963/1995, p. 224) and, perhaps most aptly, as "the archetype of wholeness" (1951/1968b, para. 351; 1952/1969a, para. 757; 1955–1956/1970a, para. 777). Like all archetypes, the self can give rise to innumerable symbolic expressions ("archetypal images"), the most important of which for Jung was the mandala, the sacred circle often represented as divided into quadrants (1934/1950/1968h; 1944/1968c, paras. 122–331; 1950/1968d; 1963/1995, pp. 220–224). He claimed that, for him personally, "finding the mandala as an expression of the self . . . was . . . the ultimate" (1963/1995, p. 222). He also stressed the nature of the self as a coincidence, complexity, or conjunction of opposites (*coincidentia/complexio/coniunctio oppositorum*) (see especially 1951/1968b, 1955–1956/1970a), and, with great significance for his entire psychology of religion, he repeatedly equated the self with the God-image (*imago Dei*), denying that images of the self and images of God could be distinguished in practice (1951/1968b, para. 42; cf. paras. 73, 320). Images of conjoined opposites and of deities, both Western and Eastern, are other symbolizations of the self commonly discussed by Jung.¹²

The Jungian analyst Warren Colman (2006), in an essay on Jung's concept of the self, writes, "The idea that mystical experience is the result of a shift in centre from the ego (which is the centre of consciousness) to the self (which is the centre of conscious *and* unconscious) is actually one of [Jung's] most brilliantly original insights, offering explanation of the very unexplainable quality of such experiences" (pp. 157–158). More specifically, the archetype of the self seems a promising resource for explaining introvertive mystical experi-

ence inasmuch as all of the characteristics of introvertive mysticism identified by Stace are reflected in Jung's characterizations of the archetype of the self. Reflecting Stace's "sense of objectivity or reality," Jung describes the self as "the objectivity of the psyche" (1944/1968c, para. 32). Where Stace identifies the importance of intense emotional experiences such as "blessedness" and "peace," Jung (1963/1995) relates how, in his own case, the experiences that led him to understand that "the goal of psychic development is the self" gave him "stability" and "inner peace" and "satisfied [him] completely" (pp. 222, 224), while in the case of one of his patients (now known to be Wolfgang Pauli), a vision of the self in the form of a mandala of "the world clock" left the patient with "an impression of 'the most sublime harmony'" (1944/1968c, para. 308). Regarding Stace's "feeling of the holy, sacred, or divine," this is reflected in Jung's frequent description of the "numinous" nature of archetypes (1951/1968b, para. 305), not least in the case of the archetype of the self (1951/1968b, para. 124; 1955–1956/1970a, para. 776). Paradoxicality, another characteristic of introvertive mystical experiences, for Stace, regularly occurs in Jung's discussions of the self (1944/1968c, para. 20, 22; 1951/1968b, para. 124, 224; 1946/1966a, para. 532) and indeed occupies an entire chapter of *Mysterium Coniunctionis* (1955–1956/1970a, paras. 36–103, especially paras. 36–39; cf. para. 4). Likewise, Stace's characteristic of ineffability appears regularly when Jung is discussing the self—through the use of epithets such as "indescribable," "inconceivable," and "irrepresentable" (1955–1956/1970a, para. 181, cf. paras. 771, 777, 787; 1944/1968c, para. 20; 1951/1968b, para. 171) and indeed "ineffable" itself (1955–1956/1970a, para. 771).

The preceding characteristics are those that introvertive mystical experience shares with extrovertive mystical experience. What about those that Stace considers distinctive to introvertive experience? Just as, according to Stace, introvertive mystical experience can have a nonspatial and nontemporal character, so too can experience of the self. The nonspatial or space-transcending character of the self is suggested, albeit using spatial terms, by Jung's paradoxical statement that "as an individual phenomenon, the self is 'smaller than small'; as the equivalent of the cosmos, it is 'bigger than big'" (1940/1968g, para. 289; cf. 1934/1954/1968a, para. 45). Regarding the self's nontemporal character, he writes that "the spontaneous manifestations of the self, i.e., the appearance of certain symbols relating thereto, bring with them something of the timelessness of the unconscious which expresses itself in a feeling of eternity and immortality. Such experiences can be extraordinarily impressive" (1946/1966a, para. 531). We could also invoke here Jung's concept of synchronicity, the principle of acausal connection through meaning (1952/1969i). The concepts of the self and synchronicity are deeply implicated with each other and indeed were developed more or less at the

same time, even though Jung published about synchronicity much later than he published about the self (Coward, 1996; Main, 2019, pp. 68–69). As Harold Coward (1996) has clarified, synchronicity is “a fundamental principle underlying the archetypes and the way in which the opposites within and without the psyche interact” and as such is “a basic building block for Jung’s concept of the self” (p. 489). The relevance of the connection here is that one of Jung’s ways of considering synchronicity was as “a psychically conditioned relativity of space and time” (1952/1969i, para. 840). To Mircea Eliade, he described synchronicity as a “rupture of time,” which “closely resembles numinous experiences, where space, time, and causality are abolished” (McGuire & Hull, 1978, p. 230). The inherently synchronistic nature of the archetype of the self would therefore account for its nonspatial and nontemporal character.¹³

Finally, there is Stace’s “Unitary Consciousness; the One, the Void; pure consciousness” (1960/1973, p. 131). Relevant to this is above all Jung’s statement about the mandala: that it “symbolizes, by its central point, the ultimate unity of all archetypes as well as of the multiplicity of the phenomenal world” (1955–1956/1970a, para. 661). A “central point” symbolizing an “ultimate unity” of the archetypal and phenomenal worlds is certainly evocative of the concept of “the One.” As for that One’s also being “the Void,” while the mandala is a geometrical image and to that extent not contentless, Jung was struck by the fact that many spontaneously produced modern mandalas had an empty center where traditionally there would have been a representation of a divinity or savior figure. In such cases, he writes, “The place of the deity seems to be taken by the wholeness of man” (1938/1940/1969g, para. 139). The particular mandala Jung had in mind in making this statement was Pauli’s vision of the world clock, and Pauli himself endorsed the idea of the “empty centre,” referring to it in his correspondence as “*Zentrum der Leere*” (“the center of the void”) (Gieser, 2005, p. 190). In a letter to Pastor Walter Bernet (June 13, 1955), Jung (1976) elaborated, with implicit reference to mandalas:

With increasing approximation to the centre there is a corresponding depopulation of the ego in favour of the influence of the “empty” centre, which is certainly not identical with the archetype but is the thing the archetype points to. As the Chinese would say, the archetype is only the *name* of Tao, not Tao itself. Just as the Jesuits translated Tao as “God,” so we can describe the “emptiness” of the centre as “God.” Emptiness in this sense doesn’t mean “absence” or “vacancy,” but something unknowable which is endowed with the highest intensity. (p. 258)

The mandala, then, can symbolize the self as a One that is also a Void. So, too, can the self’s expression through synchronicity, similarly by way of asso-

ciations with Tao. "The realization of Tao has this quality of being in a sort of synchronistic relation with everything else," Jung is recorded as saying during his *Visions* seminars of 1930–1934, adding, "that is the general mystical experience, the coincidence of the individual condition with the universe, so that the two become indistinguishable" (1988, p. 608; cf. 1935/1977k, para. 143). Regarding the void or the experience of the "vacuum-plenum," Jung, quoting the *Tao Te Ching* of Lao-tzu and commentary by Richard Wilhelm, suggests that synchronicity, like Tao, involves the experience of a kind of emptiness or "nothing" (1952/1969i, paras. 918–920). He notes in particular Wilhelm's explanation that, in Tao, "the opposites 'cancel out in non-discrimination,' but are still potentially present" (para. 921, quoting Wilhelm).¹⁴

This paralleling of Jung's characterizations of the archetype of the self with Stace's characterization of introvertive mystical experience suggests that Jung's model does have theoretical resources to account for introvertive mystical experience. However, the limitations flagged by Kelly and Grosso have not yet been directly addressed. The first of these limitations is that the experience of the archetype of the self seems, according to Jung's model, to be an experience only of an *image* of the self, however impressive such an image may be in terms of its associated characteristics and especially in its form as a mandala.

The *Unus Mundus*

In his later, post-1944 work, Jung stressed the distinction between the "archetype as such," on the one hand, and "archetypal image" or "archetypal representations (images and ideas)," on the other (1947/1954/1969c, para. 417). The archetype as such, which designates "the real nature of the archetype," is, Jung claimed, "not capable of being made conscious"; it is "transcendent," and for this reason he referred to it as not psychic but "psychoid." The archetypal image, by contrast, is how the archetype appears in consciousness. Such an image is necessarily inflected to some degree by the conditions of its manifestation, including the experiencer's personal, social, and cultural context, and hence the image expresses the archetype as such "only approximately." There can thus be innumerable different archetypal images expressing the same archetype as such, like "a set of variations on a ground theme." The archetype as such can be reasonably inferred on the basis of these manifestations, but it cannot be known directly (para. 417). In relation to the present theme, this seems to imply that the self cannot be experienced directly but only through its representations in consciousness, such as mandala images.

Influencing Jung's thought in distinguishing between archetypes as such and archetypal images was his lifelong professed adherence to Kant's epistemology

and its distinction between noumena (“things in themselves”) and phenomena (“things as they appear”).¹⁵ But as several commentators have demonstrated, Jung’s adherence to Kant was not as strict as he liked to claim (Bishop, 2000; de Voogd, 1984; Main, 2007, pp. 32–36). In particular, Jung does in practice seem to have allowed for the possibility of directly experiencing archetypes, at least at the culminating stage of individuation. This possibility is most pertinently expressed in the final chapter of *Mysterium Coniunctionis* (1955–1956/1970a, paras. 654–789), where Jung frames the process of individuation in terms of the thought of the sixteenth-century alchemist Gerhard Dorn (ca. 1530–1584).

Dorn described the alchemical process as involving a series of three conjunctions. The first conjunction, which he called the *unio mentalis* (“mental union”), consists of a union of spirit and soul (paras. 664–676). Dorn considered that in the natural human state, there was “an inextricable interweaving of the soul with the body, which together formed a dark unity (the *unio naturalis*),” variously referred to by the alchemists as “the *nigredo* [blackness], the chaos, the *massa confusa* [confused mass]” (para. 696). Jung describes it as “the original, half-animal state of unconsciousness” (para. 696). However, through the operation of spirit—that is, through the discriminating power of “conscious and rational insight”—it is possible to extract the soul from its “enchainment” to the body, to free it from “its fetters in the things of sense,” and thus “to set up a rational, spiritual-psychic position over against the turbulence of the emotions,” a position “immune to the influences of the body” (para. 696). In Jung’s psychological and psychotherapeutic terms, this “overcoming of the body” involves “making conscious and dissolving the projections that falsify the patient’s view of the world and impede his self-knowledge” (paras. 696, 673). Acquiring greater self-knowledge (paras. 674, 711) brings neurotic symptoms “under the control of consciousness” and fosters “inner certainty” and “self-reliance” (para. 756).

The *unio mentalis* is, as Jung notes, “purely intrapsychic” (para. 664); it is a state of “interior oneness” (para. 670). As such, it leaves the body and the material world unintegrated. Indeed, as Jung elaborates, it results in a deep split of the unified spirit and soul from matter and the body (para. 664). Jung does not for this reason denigrate the process, which he considers “indispensable for the differentiation of consciousness” (para. 672). However, since it was the soul that animated the body, a consequence of the soul’s separation from the body by its union with spirit is that “the body and its world” appear “dead” (para. 742). The problem confronting the alchemists was how to reanimate the body by reuniting it with the soul in a way that was not simply a return to the confusion of the *unio naturalis* (para. 742). This was the task of Dorn’s second conjunction.

In Dorn's terms, the solution to the problem of how to reunite the *unio mentalis* with the body was the alchemical process resulting in production of the *caelum*, the "heaven," "the kingdom of heaven on earth," "a heavenly substance in the body," the "blue quintessence" (paras. 691–963, 703–706, 757–758, 764). Dorn described various alchemical procedures for the production of this mysterious substance (paras. 681–685), but in Jung's interpretation such procedures are projected, symbolic expressions of the process of individuation and its facilitating method of active imagination (paras. 705–706), and the *caelum* itself, the product of the process, is a symbol of the self. As such, the *caelum* was the *imago Dei*, the image of God, which could also be symbolized by the mandala (paras. 716–719, 757) and by the central alchemical figure of Mercurius, who, as both "matter and spirit," symbolizes for Jung that the self "embraces the bodily sphere as well as the psychic" (para. 717) and indeed represents not only a "spiritualization" of matter but also a "materialization of the spirit" (para. 764).

Again, however, this is not the conclusion of the process. What the second conjunction achieved was "the representation of the self in actual and visible form"—through symbolic images—but this, for Dorn and for Jung, was "a mere *rite d'entrée*, as it were a propaedeutic action and mere anticipation of [the self's] realization" (para. 759). The final realization, "a consummation of the *mysterium coniunctionis*," could be expected "only when the unity of spirit, soul, and body [i.e., the self or 'whole man' (para. 760)] [was] made one with the original *unus mundus* ['one world']" (para. 664). This was Dorn's "third and highest degree of conjunction" (para. 760).

The concept of the *unus mundus* refers to "the potential world of the first day of creation, when nothing was yet 'in actu,' i.e., divided into two and many, but was still one" (para. 760); it is the *mundus archetypus*, the "archetypal world" (para. 761). Jung is clear that the state of being united with the *unus mundus*, made one with the "one world," is not a case of "a fusion of the individual with his environment, or even his adaptation to it, but a *unio mystica* with the potential world" (para. 767). He emphasizes that this potential world "is not the world of sense" (para. 767) but the "background of our empirical world," the "transcendental psychophysical background" in which the conditions of empirical physical and psychological phenomena inhere (para. 769), "the eternal Ground of all empirical being" (para. 760).

Such a "potential world" sounds very much like "the womb of the universe" Jung experienced in his visions (1963/1995, p. 324). As "the original, non-differentiated unity of the world or of Being" (1955–1956/1970a, para. 660), the *unus mundus* clearly must also lack differentiated content and in that sense be "contentless." What, then, about the possibility of directly experiencing it? Jung's description of the *unus mundus* refers to it as

“the primordial unconsciousness” (para. 660), which suggests that by default it is remote from experience. He acknowledges, as he had previously, that it can be “indirectly experienced via its manifestations” (para. 660), above all as the mandala (para. 661). Strikingly, though, on this occasion, at the end of his life and in his last major work, Jung seems to go further and to affirm that the *unus mundus* can also be experienced directly. He writes of the third conjunction,

Not unnaturally, we are at a loss to see how a psychic *experience* of this kind—for *such it evidently was*—can be formulated as a rational concept. Undoubtedly it was meant as the essence of perfection and universality, and, as such, it characterized an *experience* of similar proportions. We could compare this only with the ineffable mystery of the *unio mystica*, or *tao*, or the content of *samadhi*, or the experience of *satori* in Zen, which would bring us to the realm of the ineffable and of extreme subjectivity where all the criteria of reason fail. *Remarkably enough this experience is an empirical one* in so far as there are unanimous testimonies from the East and West alike, both from the present and from the distant past, which confirm its unsurpassable subjective significance. (para. 771, emphasis added)

In affirming an experience comparable to the highest unitive achievements described in Christian mysticism, Taoism, Yoga, and Zen Buddhism, Jung is surely also affirming the possibility of experiencing a “universal core” of mysticism, including introvertive mystical states as defined and characterized by Stace. In Jung’s terms, such a state could be expressed as an experience not just of an archetypal image of the self but also, rare but not impossible, of the archetype of the self as such.¹⁶

Yet difficulties remain. How does the *unus mundus* change from being a “primordial unconsciousness” to being a consciously experienced “One”? Often in mystical traditions, this problem is resolved by assuming that the One is not unconscious, but rather is supremely conscious and self-illuminating. What prevents that supreme consciousness from being realized is the ignorance or simply the activity of the ego, which as it were obscures the reality. When the ego is dissolved or appropriately stilled or aligned, the supreme consciousness that was always there is disclosed. Such, for example, is the view expressed in Patanjali’s *Yoga Sūtras* (Whitney, 2017). Jung, however, does not take this explanatory path. In fact, as Leanne Whitney notes, he explicitly rejected the idea when Erich Neumann, commenting on a draft of part of Jung’s *Memories, Dreams, Reflections*, suggested to him that “if the Self contemplates you as the ego, then the Self is not unconscious” (Whitney, 2017, p. 22, citing Jung & Neumann, 2015, p. 344).¹⁷ There will be more to say later about why Jung rejected the idea of the self’s being intrinsically conscious and self-illuminating. But first, it is necessary to get a fuller sense of

what alternative explanation Jung can give of how experiences of the self, not least the union of the self with the *unus mundus*, can be conscious. In order to do this, we need to look more closely at the relation of the self to the ego and thereby address at last the second limitation of Jung's model identified by Kelly and Grosso: its inability to account for how mystical experiences can be conscious, even superconscious while involving the disappearance of the ordinary conscious ego, on which, according to Jung, consciousness depends.

Self and Ego

In his earlier work, Jung tended to emphasize the difference between the ego and the self, stressing that the former was the center only of consciousness, while the latter was the center of the psyche as a whole, consciousness and unconscious together (1921/1971, para. 623; 1928/1966b, para. 400; 1944/1968c, para. 44). In his later work, while never contradicting this distinction (1955–1956/1970a, para. 133), Jung arguably softens it (Colman, 2006, pp. 160–161). Rather than presenting the ego as intrinsically different from the self—as different as the earth is from the sun (Jung, 1928/1966b, para. 400)—Jung sometimes now allowed that the ego could come to resemble the self. As he wrote in *Aion* (1951/1968b), “The more numerous and the more significant the unconscious contents which are assimilated to the ego, the closer the approximation of the ego to the self, even though this approximation must be a never-ending process” (para. 44). He also increasingly presented the ego as an integral part of the self. “The ego,” he wrote, “is, by definition, subordinate to the self and is related to it like a part to the whole” (para. 9; cf. 1928/1966b, para. 274; 1941/1968f, para. 315); similarly, “the integrated contents [of the collective unconscious] are parts of the self” (1951/1968b, para. 43). More specifically, Jung sometimes referred to the ego as the “exponent” of the self (para. 350; 1942/1954/1969j, para. 391). Most suggestively of all, in *Mysterium Coniunctionis* he wrote that the ego “is an essential part of the self, and can be used *pars pro toto* [as a part that stands for the whole] when the significance of consciousness is borne in mind” (1955–1956/1970a, para. 133).

For Jung, then, the conscious self is a whole that comprises the ego and archetypes as its parts. Sometimes, Jung refers just to the ego and the shadow; other times, he refers to the ego, shadow, anima/animus, and collective unconscious (para. 129n66). However, since the shadow enfolds or mediates the anima/animus and the anima/animus enfolds or mediates the collective unconscious, these are both shortcut formulations for the idea that the self is a whole that encompasses all the parts of the psyche (1951/1968b, para. 43). An important implication of such holistic formulations is that the ego is inherent in the conscious self. Indeed, since for Jung

consciousness depends on the ego, it is by dint of the ego's being integrated within the self that the self can be conscious.

Before the integration of the ego with the shadow, anima/animus, and other archetypes of the collective unconscious, the self cannot be consciously experienced. Or, rather, one could say that, from the perspective of a person predominantly identified with the ego, the self (if it is experienced) is likely to be experienced as contaminated with the nonintegrated contents of the shadow, anima/animus, and other archetypes. The self when contaminated with nonintegrated contents of the shadow would be experienced as dark, cognitively, emotionally, and ethically. The self when contaminated with nonintegrated contents of the anima/animus and of other archetypes of the collective unconscious would be experienced as dangerously alluring, overwhelming, and potentially destructive. In other words, the unconscious self would be experienced in precisely the kinds of ways highlighted by Kelly and Grosso (2007, p. 557; cf. Kelly, 2015, pp. 545–546).

However, the more the ego is integrated with the shadow, anima/animus, and collective unconscious generally, the more the self can be consciously experienced without darkening and engulfment. In such conscious experience of the self, the ego is relativized so that it is no longer the dominant center of identity, but rather that part of the self that gives consciousness to identity (1947/1954/1969c, paras. 430–432). Such is the “conscious wholeness” that consists, for Jung, in “a successful union of ego and self, so that both preserve their intrinsic qualities” (para. 430n128).

The actual transformation from an ordinary, ego-centered sense of self to a vastly amplified, holistic one can be accounted for in terms of the connection between the self and synchronicity, and in particular Jung's claim that synchronistic experiences involve “getting rid of the incommensurability between observed and observer” so as to reveal “a unity of being” (1952/1969i, para. 960). With reference to divinatory procedures, Jung argues that the perspective of synchronicity provides a method of “grasping a situation as a whole” (para. 863) and “thinking in terms of the whole” (para. 924; cf. para. 961). If the division (or “incommensurability”) has been removed between the observed object, in this case the grasped or thought-about “whole,” and the observing subject, then this suggests how it can be that, as Jung says happened during his mystical visions, “one is interwoven into an indescribable whole and yet observes it with complete objectivity” (1963/1995, p. 327; cf. 1934/1954/1968a, paras. 45–46). Such a breakdown of the distinction between the observer and the observed could be described as an experience of the self in the paradoxical double sense of being both what the self as subject experiences and how the self as object is experienced.

Jung's psychological model is thus able to account for the transformation from an ego-centered sense of identity to a sense of identity centered in the self, as well as for how the self and all that it is capable of experiencing, including all the characteristics of introverted mystical experience, can be conscious. On the one hand, this conscious self may be experienced as egoless inasmuch as the ego, having been integrated and thereby decentered, no longer forms the primary locus of identity. On the other hand, the conscious self clearly is not strictly egoless since the ego has been integrated and decentered rather than, as strict egolessness would require, dissolved or extinguished. For Jung, the remaining presence of the ego—even if completely unobtrusive—is essential if the experiencing self is to be conscious. It is important to be clear that this view implies the dependence of the consciousness of the self on a factor, the ego, that is itself not an archetype but is “acquired, empirically speaking, during the individual's lifetime” (1951/1968b, para. 6), and that is, moreover, dependent on the body inasmuch as it arises from and is sustained by a combination of somatic as well as psychic stimuli from both inner and outer sources, many of them subliminal (paras. 3, 6). Why would Jung insist that consciousness depends on such a factor when the simple alternative of ascribing intrinsic consciousness to the self was available to him and indeed had been expressly recommended by Neumann? To answer this question, we need to consider Jung's implicit metaphysics.

JUNG'S IMPLICIT METAPHYSICS

One of the most important findings of *Beyond Physicalism* was that theoretical frameworks—scientific or religious, modern or ancient, Western or Eastern—that are genuinely open to accommodating well-tested evidence of extraordinary phenomena tend to be underpinned, explicitly or implicitly, by a panentheistic metaphysics (Kelly, 2015, p. 538; Main, 2015, pp. 252–253). Panentheism is a particular view or family of views of the relationship between God (the Divine, Ultimate Reality, the One, the Absolute, or however articulated) and the world (i.e., the empirical world, the cosmos, the universe, nature). Composed of the Greek words *pan* (all), *en* (in), and *theos* (God), the term “panentheism” means literally “a doctrine [“-ism”] that everything exists in God.” The *Shorter Oxford English Dictionary* (Trumble & Stevenson, 2002, p. 2080) defines it as “the belief or doctrine that God includes and interpenetrates the universe while being more than it.” Just as with other views of the relationship between God and the world, panentheism is not a single, clearly defined position, but rather a set of related positions. Michael Brierley

(2008) considers a range of characteristics and varieties, offering a helpful generic definition in terms of the following three premises: “first, that God is not separate from the cosmos . . . ; second, that God is affected by the cosmos . . . ; and third, that God is more than the cosmos” (pp. 639–640). Otherwise put, panentheism sees the relationship between God and the world as one not of strict separation and transcendence (as in classical theism) or of strict identity and immanence (as in classical pantheism) but of mutual coinherence and harmony between transcendence and immanence.¹⁸

As I have argued in detail elsewhere (Main, 2017, pp. 1105–1111), Jung’s psychological model, which clearly shares the openness to extraordinary phenomena, can also be framed in terms of panentheism.¹⁹ Construing Jung’s psychological model as underpinned by a form of implicit panentheism depends on Jung’s effectively having equated the unconscious with God: “Recognising that [numinous experiences] do not spring from his conscious personality, [man] calls them *mana*, *daimon*, or God,” Jung wrote, adding, “Science employs the term ‘unconscious’” (1963/1995, p. 368; cf. p. 369)—a position that is as much a sacralization of psychology as it is a psychologization of the sacred. With this equation between God and the unconscious in mind, we can note that Jung’s statements about God, or the God-image, in “Answer to Job” (1952/1969a) and elsewhere, clearly depict God as not separate from the world, as affected by the world, and as more than the world (paras. 631, 686, 758), and correlatively his statements about the unconscious clearly depict it as not separate from consciousness, as affected by consciousness, and as more than consciousness (paras. 538, 555, 557–558; 1963/1995, p. 358; Main, 2017, pp. 1108–1110). Indeed, a panentheistic structure informs many (perhaps all) of Jung’s signature concepts. For example, the transcendent archetype as such is not separate from, is affected by, and is more than the immanent archetypal image. In an open letter responding to what he saw as a mischaracterization of his work by Martin Buber (1878–1965), Jung even referred to the archetypes as “immanent–transcendent” (1952/1977j, para. 1505). Again, Jung’s conception of the symbol links together the transcendent unknown and the immanent known (1921/1971, paras. 814–829) in a way that could be expressed as mutual coinherence. As I shall elaborate shortly, a panentheistic structure can also be discerned in the relationship between the self and the ego.

That Jung was operating within an implicit metaphysics of panentheism is evident from his discussion of the three conjunctions of Dorn. He discusses the conjunctions as processes that do or might take place at the cultural as well as at the personal level. Thus, he equates the first conjunction, the *unio mentalis*, or union of the spirit and soul in “the overcoming of the body,” with the achievement of Christianity (1955–1956/1970a, paras.

747, 773). This conjunction reflects the metaphysics of theism: the unified spirit–psyche is separate from the body (para. 747), not affected by the body (para. 696), and more than the body in the senses of being implicitly considered both more real and more valuable (para. 673). Culturally, this condition results in an “apparently irremediable separation of spirit from nature and the body” (para. 664), a form of dualism in which “the body and its world” are experienced as “dead” (para. 742)—a description evocative of disenchantment (Main, 2017, pp. 1100–1104).

While Jung, like the alchemists, affirmed the value of the first conjunction, he also, like them, considered that “a new interpretation” of the archetypes was needed (1955–1956/1970a, para. 744), one in which “the world of natural bodies [would lay] claim to equality and hence to realization” (para. 747). For Jung, the processes of alchemy and its modern counterpart, individuation, were both attempts to establish such a renewed relationship between spirit and the body and hence between God and the world—a relationship of union rather than of fundamental separateness. This “extremely difficult task of uniting the wayward physical man with his spiritual truth” (para. 774) was the second conjunction, and the goal it held out was essentially a panentheistic one: the spirit–psyche would be no longer separate from the body (paras. 764, 766), would be affected by the body inasmuch as in “sublimating matter” the alchemist also “concretized spirit” (para. 764), and yet would remain more than the body in that the resulting unity, the *caelum*, or self, was “a transcendental principle” (para. 711). Only through such a panentheistic relationship between God and world, or between spirit–psyche and body, would the third conjunction of union between the self and the *unus mundus* become possible (para. 770).

In light of the importance that Jung, like the alchemists, attached to “the body and its world” in this implicitly panentheistic outlook, we can understand the deeper import of Jung’s claims that consciousness depends on the ego. In *Mysterium Coniunctionis*, Jung refers to the ego, in terms familiar from his earlier work, as “the indispensable condition for all consciousness, the latter being nothing but the association of an object or a content with the ego” (para. 129). But in the same breath, he also describes the ego more enigmatically as “a dark body” from which “our consciousness issues” (para. 129). He continues, “The ego, ostensibly the thing we know most about, is in fact a highly complex affair full of unfathomable obscurities. Indeed, one could even define it as a *relatively constant personification of the unconscious itself*, or as the Schopenhauerian mirror in which the unconscious becomes aware of its own face” (para. 129). Jung elaborates on the suggestion that the ego enables the unconscious to become “aware of its own face” with the following cosmogonic speculation:

All the worlds that have ever existed before man were physically *there*. But they were a nameless happening, not a definite actuality, for there did not yet exist that minimal concentration of the psychic factor, which was also present, to speak the word that outweighed the whole of Creation: That is the world, and this is I! That was the first morning of the world, the first sunrise after the primal darkness, when that inchoately conscious complex, the ego, the son of the darkness, knowingly sundered subject and object, and thus precipitated the world and itself into definite existence, giving it and itself a voice and a name. (para. 129)

Rather than being as different from the self as the earth is from the sun (1928/1966b, para. 400), “the ego and its field of consciousness” are now described by Jung in alchemical terms precisely as “the refulgent body of the sun” (1955–1956/1970a, para. 129). Noting “the totality character of the sun-image” and “its frequent use as a God-image” (para. 130), Jung argues that, with this sun symbol, the alchemists were, albeit unwittingly, “establishing an intimate connection between God and the ego” and even “expressing an identity of God and ego” (para. 131).

Ever alert to the dangers of inflation, Jung tried to mitigate the grandiosity of these statements by claiming that, since they were expressions of the unconscious, “only unconscious nature can be accused of blasphemy but not the man who is its victim” (para. 131). In further mitigation, he points out that ideas such as these were “taken as self-evident” in India (para. 131). He contrasts “the Indian mind,” whose “nature” it is “to become aware of the world-creating significance of the consciousness manifested in man,” with “The West,” which “has always emphasized the littleness, weakness, and sinfulness of the ego” (para. 131). He notes the Indian solution of “merging the ego, the personal atman, with the universal atman and thus explaining the ego as the veil of Maya” (para. 132). This parallel enabled Jung to claim that the insights he was articulating were “not the arbitrary opinions of de-ranked minds” but expressions of “the nature of the psyche itself,” which operates in the same way “in East and West alike” (para. 132). Most interesting, however, is Jung’s acknowledgment that, in other writings, he had presented a similar argument: “Only there it was not a question of ego but of the *self*, or rather, of the personal atman in contradistinction and in relation to the suprapersonal atman” (para. 133). He stresses that the implicit parallel he is now drawing between the ego and the personal atman does not contradict the parallel he drew in earlier work between the self and the personal atman. For, in the formulation quoted previously, the ego “is an essential part of the self, and can be used *pars pro toto* when the significance of consciousness is borne in mind” (para. 133).

This unexpected elevation of the ego into something cosmogonic, divine, and (at least to some extent) substitutable for the self can, I think, best be

understood in terms of Jung's implicit panentheism. First, the partial substitutability of the ego for the self reflects the closer relationship between the world and God in panentheism than in theism. The radical difference between ego and self that was emphasized in Jung's earlier writings (1928/1966b, para. 400) arguably reflects the theistic separation between the world and God, while the much closer relationship emphasized in his later formulations reflects the implicitly panentheistic perspective that was increasingly coming to inform his work.

Second, the connectedness and even identity of the ego with the divine reflects the nonseparation of the world and God in panentheism. This nonseparation is often expressed through the "panentheistic metaphor" or "analogy" of the world's being God's body (Brierley, 2004, pp. 6–7; Cooper, 2006, pp. 311–313). It implies that the world, as an aspect of God, is also divine. That is to say, all the processes and transformations associated with empirical reality, including birth, growth, flourishing, decay, and death, are also expressions of the divine. Thus, the ego, though acquired during the individual's lifetime, dependent on the body, and experienced as little, weak, and sinful, is nevertheless, as a part of "God's body," also divine.

Third, the cosmogonic significance that Jung ascribes to the ego reflects the importance that is ascribed to the world in panentheism. In panentheism, the world is needed for God's conscious realization (Brierley, 2004, pp. 9–10). For some versions of panentheism, such as those based on process philosophy, God's self-realization need not have taken place or be taking place through this exact world since the world is contingent, but some contingent world is necessary (Cooper, 2006, p. 183; cf. Göcke, 2018, pp. 177–182). Correspondingly, Jung came to believe that the empirical ego, contingent as it is and dependent on the body, is necessary for making conscious the self, and since the self for Jung is indistinguishable from the God-image, this amounted to the ego's bringing the world and hence God's immanence out of a state of unconsciousness into a state of conscious realization (1963/1995, pp. 370–372). In light of this belief, or "explanatory myth" (p. 371), of Jung's, we can understand why he rejected Neumann's suggestion that the self is intrinsically conscious. For Jung (1976), the contribution of human consciousness to the realization of the divine gave human life its meaning:

Since a creation without the reflecting consciousness of man has no discernible meaning, the hypothesis of a latent meaning endows man with a cosmogonic significance, a true, *raison d'être*. If on the other hand the latent meaning is attributed to the Creator as part of a conscious plan of creation, the question arises: Why should the Creator stage-manage this whole phenomenal world since he already knows what he can reflect himself in, and why should he reflect himself at all since he is already conscious of himself? Why should

he create alongside his own omniscience a second, inferior consciousness—millions of dreary little mirrors when he knows in advance just what the image they reflect will look like? (p. 495)²⁰

In sum, just as in panentheistic metaphysics the world is essential for God's conscious realization, so, in the more psychological terms of Jung's thought, the ego, despite all its limitations, is essential for conscious realization of the self.

Finally, returning to the question of introvertive mystical experience, we can see, in relation to Jung's implicit panentheism, why it has been so difficult both to isolate the introvertive moment within his experience and then to explain it within his theory. Jung, it appears, experienced introvertive mystical states; his theoretical model ultimately has resources to explain such states; and, significantly, subsequent scholars have been able fruitfully to explore his work in relation to mystics for whom introvertive experiences were central (Dourley, 2014a; Henderson, 2014; Stein, 2014). But Jung's own deep inclinations were not toward the cultivation of introvertive mystical states. When he discusses mysticism, his emphasis tends to be toward more visionary than contemplative, more "numinous" than "luminous," and more "hot" than "cool" varieties (Schlamm, 2006; Smart, 1997, pp. 175–176, 189), even toward prophetic varieties (Kingsley, 2018). This probably reflects Jung's panentheistic orientation: he did not consider the transcendent pole of mystical experience, culminating in a sense of pure, egoless, contentless consciousness, more important than its immanent pole, in which the divine can manifest itself in and through creation.²¹

Jung framed the ultimate concern of his life and work in various ways, but in each way transcendence is balanced with immanence. One way he framed "the decisive question" was whether we are related to "something infinite" (1963/1995, p. 357). In this context, he argued (p. 358) that awareness of our limited nature is essential if we are to realize the "feeling for the infinite" and for "boundlessness" in our relationships: "In knowing ourselves to be unique in our personal combination—that is, ultimately limited—we possess also the capacity for becoming conscious of the infinite. But only then!"

Another way he expressed the aim of his works, as well as of the "images in which [he had] lived," was as "fundamentally nothing but attempts, ever renewed, to give an answer to the question of the interplay between the 'here' and the 'hereafter'" (1963/1995, p. 330). That Jung did not denigrate the limited "here" in favor of the boundlessness of the "hereafter" is powerfully shown by the myth of the afterlife that he developed, in which he speculated that "the souls of the dead" are "dependent on the living for receiving answers to their questions, that is, on those who have survived them and exist in a world of change" (p. 339), for "only here, in life on earth, where the opposites

clash together, can the general level of consciousness be raised. That seems to be man's metaphysical task" (p. 343).

A third way in which Jung framed the "goal" of his life was as an attempt to find a myth that could fit humanity "meaningfully into the scheme of creation" (p. 371). The myth he found was, as we have seen, precisely the pantheistic one of how humanity's "reflecting consciousness," through reconciling "the opposites within the God-image," enables "the Creator [to] become conscious of His creation," thereby bringing about what is, Jung writes, effectively a "second cosmogony" (p. 371).

Fourth and last, Jung framed his ultimate concern as a quest for wholeness (1963/1995, p. 222; Smith, 1990). As expressed most magisterially in his last major work, *Mysterium Coniunctionis* (1955–1956/1970a), this sought-after wholeness included not only the achievement of an "interior oneness" (para. 670), however spiritual (the first conjunction), but also the reuniting of that spiritual–psychic oneness with the body and its world in order that "the insights gained should be made real" (para. 679) (the second conjunction). In a further stage, the resulting "unity of spirit, soul, and body" (para. 664) might then be united with the *unus mundus*, the "potential world," "archetypal world," or "eternal Ground of all empirical being" (paras. 760, 761) (the third conjunction). Experience of this ultimate unity or wholeness, which, as we have seen, Jung did believe possible, could include all the attributes of introvertive mystical experience, as identified by Stace, but it was also, crucially, a unity that did not erase but included "the multiplicity of the phenomenal world" (para. 661).

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NOTES

1. Jung's full account of his mystical near-death experience appears in Chapter 10 of *Memories, Dreams, Reflections* (1963/1995, pp. 320–329). He also described the experience, in much more condensed form and with a few minor differences or additions of detail, in a letter to Kristine Mann (February 1, 1945), who was then dying of cancer (Jung, 1973, pp. 358–359). In her biography of Jung, Deirdre Bair (2004)

discusses the context of the experiences (pp. 496–502). According to Bair, the content of the account of Jung’s mystical near-death experiences contained in the manuscript version of *Memories, Dreams, Reflections* (the so-called *Protocols*) “closely follows the [published] version in Chapter 10 of *MDR*, but the language is much more earthy and direct. The language of *MDR* has been not only refined but also interlaced with elaborations and clarifications that are not found in the *Protocols* or in any supporting documentation [consulted by Bair]” (2004, p. 811n3). While a certain caution may be needed regarding the weight given to particular expressions, Jung’s account appears to be otherwise fairly reliable. For other discussions of Jung’s mystical near-death experience, see Shamdasani (2008), Drob (2010, pp. 207–227), Dourley (2014b), and Stephens (2020, pp. 23–27).

2. See, for example, Jung (1905/1977h, 1920/1948/1969f, 1934/1969h, 1938/1977c, 1948/1977i, 1950/1977d, 1950–1955/1977f, 1951/1969d, 1954/1977g, 1957/1977b, 1958/1977a, 1960/1977e).

3. Marshall (2005) offers a fine critique of many aspects of Stace’s typology of mystical experiences (pp. 147–167). Nevertheless, since experiences of the type Stace calls introvertive have been and continue to be reported, the question remains of whether and how Jung’s thought could account for such experiences.

4. A much richer list of typical features of extrovertive mystical experiences can be found in Marshall (2005, p. 27). Jung’s account (1963/1995, pp. 320–329) includes almost all of the features mentioned there. The focus of the present chapter, however, is on those elements of Jung’s experience that contribute to its qualifying as introvertive.

5. As Marshall notes (2005, p. 56), Stace is inconsistent in including altered temporality or nontemporality as a distinguishing characteristic of introvertive experiences, for this quality can also be found in some of Stace’s own most detailed cases of experiences that he designates as extrovertive.

6. In this chapter, I focus on the mystical rather than the near-death aspects of Jung’s experience. Given my focus on introvertive mysticism, I also do not engage here in analysis of the rich content of Jung’s experiences. Either of these alternative approaches to the material warrants a study in itself.

7. I thank Paul Marshall for drawing my attention to this distinction.

8. As an addendum, it is also worth noting that Jung’s experiences included qualities that are not emphasized by Stace but arguably should have been. Perhaps the most significant of these omissions by Stace is the lack of any reference to noetic quality. As Marshall (2005) comments, the omission is “a major shortcoming because heightened knowledge, understanding, or meaning is commonly reported” (p. 55). In Jung’s experience, this quality is strongly emphasized. For example, there is his sense that, had he entered the temple on the meteorite in his vision, he would have learned the real meaning of his life (1963/1995, p. 322), his apparent foreknowledge of his doctor’s imminent death (p. 324), and his explicit claim that his experience gave him access to a form of “objective cognition,” which he says “lies hidden behind the attraction of the emotional relationship,” is “the central secret,” and alone makes possible “the real *coniunctio*” (p. 328).

9. Jung (1988) conducted a seminar on visions between 1930 and 1934. The visions discussed were primarily the result of exercises in active imagination, as were Jung's own visions in *The Red Book* (2009).

10. Jung's "Psychological Commentary on 'The Tibetan Book of the Great Liberation'" carries the date "(1939/1954)." However, the date "1954" in this case refers not to a revision but to the date of first publication of an essay written in 1939, as explained in an editors' note (Jung, 1939/1954/1969e, p. 475n1).

11. For a helpful collection of secondary literature on Jung's thought, see Young-Eisendrath and Dawson (1997/2008). For contextual background, see especially Shamdasani (2003).

12. For more on Jung and wholeness, see Smith (1990), Main (2019), and Main, McMillan, and Henderson (2021).

13. Synchronicity is the principal concept that enables Jung's psychological model to account for extraordinary or paranormal experiences generally (Jung, 1952/1969i; Main, 1997, 2012). Demonstrating the full contribution of synchronicity to accounting also for mystical experiences, through its close implication with the concept of the self, would help establish the continuity of paranormal and mystical phenomena in Jung's understanding (cf. Marshall, 2015, pp. 40–43). However, such a task is beyond the scope of the present chapter.

14. Jung arguably also has in mind here what he had written in 1916 in the first of his "Seven Sermons to the Dead" (*Septem Sermones ad Mortuos*) (in Jung, 2009, pp. 346–348) about the *Pleroma* (the "fullness"). The sermon opens, "Now hear: I begin with nothingness. Nothingness is the same as the fullness. . . . We call this nothingness or fullness the *Pleroma*. Therein both thinking and being cease, since the eternal and endless possess no qualities" (Jung, 2009, pp. 346–347). The scholar of Gnosticism Gilles Quispel reports that, much later, after Jung had presented his concept of synchronicity for the first time at the 1951 Eranos conference, he seemed "quite relieved and unusually good humoured." Quispel (1995) continues, "All his life he had rummaged in the collective unconscious, but now he had forced a breakthrough from the soul to the cosmos. He beamed when he told me: '*Es geht um die Erfahrung der Fülle des Seins*'; it is the experience of the fullness, the *pleroma*, of Being that matters" (p. 19).

15. A wry comment of Marshall's (2005) in relation to how Rudolf Otto's theorization of mysticism was hampered by his Kantian commitments applies equally to Jung: "Kantian philosophy is not the most congenial environment in which to pursue a metaphysics of mystical experience" (p. 142).

16. Harald Atmanspacher (2021, pp. 157–161) similarly draws on Jung's use of Dorn's three conjunctions to argue that unitary reality can be directly experienced. So, too, does Murray Stein (2014) in his Jungian interpretation of the Zen ox-herding pictures, specifically in relation to the ninth picture (p. 124). For a description of what the perspective of a person united with the *unus mundus* might be like, see Jung's letter to Pauli of December 1956 (Meier, 2001, pp. 156–157).

17. For Neumann's own Jung-influenced interpretation of mysticism, see Neumann (1948/1968) and Marshall (2005, p. 217).

18. For fuller discussion of panentheism, see Atmanspacher and von Sass (2017), Biernacki and Clayton (2014), Brierley (2004), Clayton and Peacocke (2004), Cooper (2006), and Göcke (2018, 2019).

19. Jung generally disclaimed that he engaged in metaphysics, which is why I have referred to his metaphysics here as implicit. In identifying panentheism as Jung's implicit metaphysics, I do not do so exclusively. Panpsychic emergentism (Cambray, 2009), process philosophy (Haule, 2011), dual-aspect monism (Atmanspacher, 2012, 2021), and objective idealism (Kastrup, 2021) have all been illuminatingly applied to Jung's thought. Each of these metaphysical models is, however, compatible with an overarching framework of panentheism.

20. Neumann (Jung & Neumann, 2015) had in fact argued (February 18, 1959) that the same outcome of rendering human life meaningful could be achieved on the assumption that the self was intrinsically—even if not absolutely—conscious: "If we humans are complexes of the divine unconscious, which he or it becomes conscious of while we make conscious our individuality with our human consciousness, the accent on the individual would be still greater without our having to formulate the Self or God as unconscious" (p. 344). Jung responded (March 10, 1959) that his view of the unconsciousness of God was not just an idea but also based on "a most painful experience of almost immeasurable impact that cannot easily be debated" (p. 348).

21. Neumann (1948/1968), influenced by Jung, places a similar emphasis on what he calls an "imminent world-transforming mysticism," in which the numinous is experienced in the world "everywhere and at all times" (p. 414). He contrasts this idea with what he calls "nihilistic uroboros mysticism," in which the mystic rejects the world (pp. 397–401; see also Marshall, 2005, p. 217).

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IS THE UNIVERSE CONSCIOUS?

Reflexive Monism and the Ground of Being

Max Velmans

This chapter examines the integrative nature of *reflexive monism* (RM), a psychological/philosophical model of a reflexive, self-observing universe that can accommodate both ordinary and extraordinary experiences in a natural, nonreductive way that avoids the problems of reductive materialism as well as the (inverse) pitfalls of reductive idealism. To contextualize the ancient roots of the model, this chapter touches briefly on classical models of consciousness, mind, and soul and how these differ in a fundamental way from how mind and consciousness are viewed in contemporary Western philosophy and psychological science. The chapter then travels step-by-step from such contemporary views to RM and, toward the end of the chapter, to more detailed comparisons with Hindu Vedanta and Samkhya philosophy and with cosmopsychism (a recently emergent, directly relevant area of philosophy of mind).

According to RM, there never was a separation between what we normally think of as the “physical world” and what we think of as our “conscious experience.” In terms of its *phenomenology*, the phenomenal physical world is *part-of* conscious experience, not *apart-from* it. This phenomenal world can be thought of as a biologically useful *representation* of what the world is like, although it is not the world as-described-by modern physics, and it is not the *thing itself*—supporting a form of *indirect (critical) realism*. The analysis then outlines how three-dimensional phenomenal worlds are constructed by the mind/brain, focusing specifically on *perceptual projection*, and then demonstrates how normal, first-person conscious experiences (e.g., of phenomenal worlds) and their associated, third-person viewable neural correlates can be understood as dual manifestations of an underlying *psychophysical mind*, which can, in turn, be understood as a psychophysical form of information processing. This dual-aspect monism combines ontological monism with a form of epistemological

dualism in which first- and third-person perspectives on the nature of mind are complementary and mutually irreducible—a principle that turns out to have wide-ranging applications for the study and understanding of consciousness.

The chapter then considers the evolution and wider distribution of consciousness (beyond humans) through a brief analysis of the many forms of *discontinuity theory* versus *continuity theory* and argues that to avoid the “hard problem” of consciousness, one may need to treat its *existence* as fundamental and as *coevolving* with the evolution of its associated material forms. This, in turn, takes one to a central issue: What does consciousness actually do? The analysis argues that its central function is to *real-ize* existence (to know it in a way that makes it subjectively real). With these foundations in place, we then come to the heart of the chapter—the ways in which RM provides a very different view of the nature of the universe to those offered by either dualism or materialist reductionism. As summarized later in this chapter, “in this vision, there is *one* universe (the *thing-itself*), with relatively differentiated parts in the form of conscious beings like ourselves, each with a unique, conscious view of the larger universe of which it is a part. Insofar as we are parts of the universe that, in turn, experience the larger universe, we participate in a reflexive process whereby the universe experiences itself.”

This chapter next reviews the precise ways in which this reflexive monist understanding of “consciousness” and “mind” relates to later developments in Vedic philosophy and suggests a way of bridging contemporary Western and classical Vedic ways of understanding consciousness and mind. Finally, the chapter considers what can be said of mystical experience and the ground of being, following the principle that this ground must have the power to manifest both the universe in the form that science shows it to be *and* our ability to experience the universe in the way that we do. In this, RM is shown to be a dual-aspect monist form of *cosmopsychism*—a recent area of development within philosophy of mind. The chapter compares and contrasts this with idealist versions of cosmopsychism and argues that RM allows for an integrated understanding of realism versus idealism, dualism versus monism, how ordinary experience relates to mystical experience, and how consciousness relates to mind. RM also provides an “open” conceptual system that can, in principle, incorporate a range of parapsychological effects.

ANCIENT WESTERN THEORIES OF SOUL/MIND/CONSCIOUSNESS

The Orphic and Pythagorean mystery teachings of ancient Greece held the soul to be immortal, but early Greek thinkers made no consistently clear

distinctions between soul, mind, and consciousness—and, then, as now, their theories about how soul/mind/consciousness relate to the physical world were wide ranging. As noted by Skrbina (2009, 2020), many were panpsychists. For example, Thales (ca. 624–546 BCE) believed that souls provide the power of movement; all things had such power and, therefore, had souls. Pythagoras (ca. 570–495 BCE) believed number (mathematics) to be the basis of everything and viewed number as a form of intelligence. Consequently, there is intelligence in everything. For Anaxagoras (ca. 510–428 BCE), the fundamental force in the cosmos was mind (*nous*). Although it is more evident in living organisms (humans, animals, plants), it also penetrates into nonliving things. Hence, reality itself is mindlike and intelligent. In contrast, Leucippus and his student Democritus (460–370 BCE) were materialists, believing the ultimate components of nature to consist of atoms and the void. The soul, according to Democritus, consists of atoms of a particular kind—spherical fire atoms that can move easily among other atoms and support the heat and mobility associated with life (Berryman, 2016).

We return to echoes of these ancient philosophies toward the end of this chapter. However, the “mind–body problem” in its modern form is generally attributed to a more concrete formulation of it by the French philosopher and mathematician René Descartes. In his *Discourse on the Method* (1637/1998), Descartes suggested that the capacity for language and the faculty of reason provide a flexibility, an ability to respond appropriately to every novel situation in humans, which could never be accomplished by any mechanistic system. Rather, these capacities must be manifestations of a second, fundamentally different substance in the universe—*res cogitans*, a substance that thinks. Human nature, then, is a duality—a union of *res extensa*, in the form of a material body and brain extended in space, and *res cogitans*, an immaterial soul or mind (a form of substance dualism).

In his *Passions of the Soul* (1649/2017), Descartes argued that causal interactions between body and mind/consciousness/soul operate in a hydraulic fashion. Stimulation of the sense organs produces motions in the “animal spirits” contained in the nerves, which produce motions in the pineal gland, and these produce perceptions in the soul. Conversely, the exercise of free will by the soul produces movements in the animal spirits in the pineal gland, which are transmitted via the nerves to the muscles (a form of dualist interactionism).

I do not have space to present an evaluation of dualist interactionism here.¹ However, even in Descartes’s time, this way of conceptualizing the mind–body relation was thought to present a problem. If the body and brain are *res extensa* and the soul is *res cogitans*, how could substances as different as these causally interact? Expressed in modern terms, how could activi-

ties in neurons cause changes in consciousness? And how could activities in consciousness cause changes in the activities of neurons? As early as 1643, in her personal correspondence with Descartes, Princess Elizabeth of Bohemia thought such interactions were inconceivable (Shapiro, 2007)—thereby giving voice to one version of what is now known as the “hard problem of consciousness” in philosophy of mind.

Note, too, that, like the ancient Greeks, Descartes made no consistently clear distinctions between “mind,” “consciousness,” and “soul.”² However, in modern Western discourse these terms have acquired different meanings. Even now, “consciousness” is not easy to define.³ Nevertheless, in contemporary psychology and philosophy of mind, one can begin to define it ostensibly by contrasting situations where it is present and absent (for example, situations where one is conscious *of* something as opposed to not being conscious of that thing). That is, consciousness can partly be defined in terms of the presence or absence of *phenomenal* contents—forms of *phenomenal consciousness* that can, in principle, be categorized and measured. “Mind,” by contrast, commonly refers to psychological *states* or *processes* that may or may not have associated conscious contents. For example, within cognitive psychology, the operations of mind are conventionally thought of as a form of *human information processing* that is embodied in the brain, and there is considerable evidence for a “cognitive unconscious” (Kihlstrom, 1987; Shevrin & Dickman, 1980; Velmans, 1991a). In contrast, “soul” continues to have its traditional reference to some essential aspect of human identity that survives bodily death—which, on current conventions, places it beyond the reach of empirical science. These conventional definitions and distinctions are widely accepted within current mainstream philosophy and science. So, in order to engage the mainstream literature on its own terms, I will initially adopt them in the analysis that follows, although we will return to more expansive views of consciousness, mind, and soul toward the end of this chapter.

MATERIALIST REDUCTIONISM AND SOME OF ITS PROBLEMS

Given the problems with classical dualism, combined with the difficulties of incorporating *res cogitans* within a contemporary scientific worldview, over the past one hundred years or so, mainstream theories about the nature of mind and consciousness within Western science and philosophy have been predominantly materialist, viewing mind and consciousness either as *nothing more than* states or functions of the brain (or a similarly functioning system), as in central-state identity theory, physicalism, psychofunctionalism, and

computational functionalism, or as *products of* the brain (or a similarly functioning system), as in emergentism, property dualism, and “nonreductionist” physicalism. Again, I do not have space to evaluate these theories here.⁴ However, given the prominence of materialist theories, it is important to be clear about a few of the main reasons that I reject them in order to provide a context for the arguments that follow for a broader understanding of consciousness, mind, and even, perhaps, soul that is neither dualist nor materialist (in any of the senses mentioned above).

Physicalist reductionist arguments come in many forms. But they all claim the phenomenology of consciousness to be misleading and trust in it to be naive. Commonly, they try to show that if one can find the neural *causes* or *correlates* of consciousness in the brain, then this would establish consciousness *itself* to be a brain state (see, e.g., Churchland, 1989; Crick, 1994; Place, 1956). Let us call these the “causation argument” and the “correlation argument.” In Velmans (1998a), I show that such arguments are based on a fairly obvious fallacy. For consciousness to be nothing more than a brain state, it must be *ontologically identical* to a brain state. However, *correlation* and *causation* are very different to *ontological identity*. As it happens, various *nonreductionist* positions, such as dualist interactionism, dual-aspect monism, RM, and panpsychism, *agree* that consciousness (in humans) is causally influenced by and correlates with neural events, but they *deny* that consciousness is nothing more than a state or function of the brain. As no information about consciousness *other than its neural causes and correlates* is available to neurophysiological investigation of the brain (the problem of “other minds”), it is difficult to see how such research could ever settle the issue. The *only* evidence about what conscious experiences are like comes from first-person sources, which consistently suggest consciousness to be something other than or additional to neuronal activity. Given this, I conclude that materialist reductionism via this route *cannot be made to work*.

Functionalist reductionists argue (in similar fashion) that if one can find the forms of *information processing* that relate most intimately to given conscious experiences, that would demonstrate such experiences to be nothing more than their associated processing. However, in Velmans (1991a)⁵ (a target article in *Behavioral and Brain Sciences*), I presented a detailed analysis of extensive research on how phenomenal consciousness *actually* relates to human information processing. This demonstrated (1) that many information processing functions associated with consciousness can also be carried out without it; (2) that we are not consciously aware of *how* we carry out most of the processes that are said to “be conscious”—which leads one to question the precise sense in which those processes can be said to “be conscious”; and (3) that for processing commonly thought of as conscious, the phenomenal

experience accompanying that processing *follows* the processing to which it most closely relates and cannot therefore *enter into* it. For example, once one can consciously see this print, the detailed visual processing required to see this print has already operated!

It should be apparent, even from this brief summary, that, in order to understand the role of phenomenal consciousness, it is important to neither conflate phenomenal consciousness with its associated mental operations nor conflate “consciousness” with “mind” in the way that these terms are currently understood—an issue to which we return toward the end of this chapter. Contra reductionist functionalism, the *Behavioral and Brain Sciences* target article demonstrated that phenomenal consciousness cannot be *reduced* to the (third-person describable) functions with which it is most closely associated. This also implicitly challenged the ubiquitous Darwinian assumption that consciousness must have arisen as a consequence of a random gene mutation that persisted only because it gave organisms a selective functional advantage in survival fitness. If consciousness cannot be *reduced to* a given, third-person describable function, it cannot *carry out* that function.⁶

Many commentators thought that the only alternative to this was epiphenomenalism, but my analysis (in Velmans, 1991a, 1991b) suggested a radical, nonreductive alternative: consciousness presents a *causal paradox*. Viewed purely from a *third-person perspective*, the operations of the embodied human mind can be entirely explained in terms of third-person observable brain states and functions. Consequently, conscious phenomenology appears to be epiphenomenal. However, viewed from a *first-person perspective*, there are many situations in which the same operations of mind are knowable through their associated conscious experiences. Consequently, from this perspective, conscious phenomenology appears to be causally effective, and for normal purposes there is no need to explain or even know about what is happening in our brains. For example, one can explain the operations of one’s own mind in terms of how one’s percepts, thoughts, and feelings affect each other, subsequent behavior, and so on. To resolve this paradox, one has to understand how first- and third-person accounts of mind are *complementary* and *mutually irreducible*. A complete theory of mind requires both.^{7,8} We return to this fundamental issue and to an alternative account of how Darwinian evolution affects the evolution of consciousness later in this chapter.

THE REFLEXIVE MODEL OF PERCEPTION

To begin with, however, we need to reexamine conscious experience itself. Although it is rarely recognized, materialist reductionists adopt implicit, dual-

ist presuppositions about how the phenomenology of consciousness relates to the brain and physical world.⁹ According to Descartes, the material world is composed of *res extensa*, a substance that has both location and extension in space. Consciousness is formed out of *res cogitans*, a substance that thinks but that has no location or extension in space. If this idea is right, then one cannot “point at” consciousness, as it has no location. At best, one might be able to point at the place where consciousness interfaces with the material world. According to Descartes, this is at the pineal gland, located in the center of the brain. Physicalist and functionalist philosophers (e.g., Dennett, 1991; Searle, 1992) argue that consciousness is nothing more than a state or function of the brain. It might be difficult to point with any precision at such states or functions, as they are likely to be distributed properties of large neuronal populations (see Dennett & Kinsbourne, 1992). Nevertheless, if one had to point, one would point at the brain. In short, classical dualists and reductionists largely agree about where the external physical world, the brain, and conscious experiences are respectively *placed*. Despite their dispute about *what* experiences are, they agree (roughly) about *where* they are. The brain is as close to experiences as one can get—and if experiences are in the brain, they cannot be located in or part of the external physical world. One could describe this view as *phenomenological internalism*.

In Velmans (1990, 1993b, 2000, 2008, 2009a, 2012b, 2017a), I have argued that this widely adopted presupposition has no basis either in science or in everyday experience. In order to decide where consciousness is (or whether it has any location), one has to attend to its actual phenomenology. Let me illustrate with a very simple example. Suppose you stick a pin in your finger and experience a sharp pain. Within philosophy of mind, pain is generally regarded as a paradigm case of a conscious, mental event. But where is the pain? Hampered by their theoretical presuppositions, dualists and reductionists take this to be a rather difficult question. However, if forced to point, they would point (vaguely) in the direction of the brain (see, e.g., comments on this issue by Nagel, Harnad, Searle, Marcel, and Dennett, following Velmans, 1993b). I take this to be a very simple question. The pain one experiences is in the finger. If one had to point at it, one should point at where the pin went in. Any reader in doubt on this issue might like to try it.

Let me be clear that this sharp difference of opinion is about the experienced pain and not about the antecedent physical causes (the deformation and damage to the skin produced by the pin) or about the neural causes and correlates of pain. The proximal neural causes and correlates of pain are undoubtedly located in the brain. But the neural causes and correlates of a given experience are not themselves that experience. In science, causes and correlates are not ontological identities (see brief analysis above).

This subjective location of pains in parts of the experienced body rather than “nowhere” or “in the brain” exemplifies a general principle that leads one away from both dualism and reductionism toward a “reflexive” model of how consciousness relates to the brain and the physical world (see Velmans, 1990). In many respects, there is no difference between these theoretical positions. For example, dualism, reductionism, and the reflexive model agree that there are physical and neurophysiological causes and correlates of a given experience within the brain—and that we can leave it to science to discover what these are. But they disagree about the nature and location of the experiences themselves. Dualists claim that, being forms of *res cogitans*, experiences have no location or extension in space (although they interface with the brain). Materialist reductionists claim that, being brain states or functions, all experiences must be in the brain (despite how they seem). According to the reflexive model, the only evidence about conscious phenomenology comes from first-person sources. Consequently, the properties of that phenomenology can be determined only from first-person sources. For conscious appearances, *the appearance is the reality* (Searle, 1992). Consequently, if a pain appears to be in the experienced finger, then that is where the pain is. The damage produced by a pin-in-itself in the finger-in-itself, once it is processed by the brain, winds up as a phenomenal pain in the experienced finger, located more or less where the experienced pin went in. That is why the entire process is called “reflexive.”

Notice that if one stabs one’s finger with a pin and one attends to the consequent pain phenomenology, one has no additional experience of pain either “nowhere” or in the brain. Nor can any phenomenal pain “nowhere” or in the brain be observed by an external observer (from a third-person perspective, only its neural causes and correlates can be observed). Given that there is no first- or third-person evidence for phenomenal pain either “nowhere” or “in the brain,” I suggest that this is a theoretical fiction. Only the reflexive model is consistent with the evidence of actual experience.

To put the basic principle in a more general way, as a first approximation, *experiences are where we experience them to be*. For example, Figure 5.1 provides an initial map of how consciousness, brain, and the physical world relate to each other in normal visual perception. It shows a typical psychology experiment in which an experimenter E observes a subject S attending to a light stimulus, and the aim of the experiment is to understand the causal processes responsible for S’s conscious experience of the light. In this initial form, the figure shows only how the causal sequence might *appear* to E and how the physical light *appears* to S. Viewed in these terms, the figure is consistent with both science and common sense. Given suitable measuring instruments, E might be able to observe the physical lightbulb, emitted light

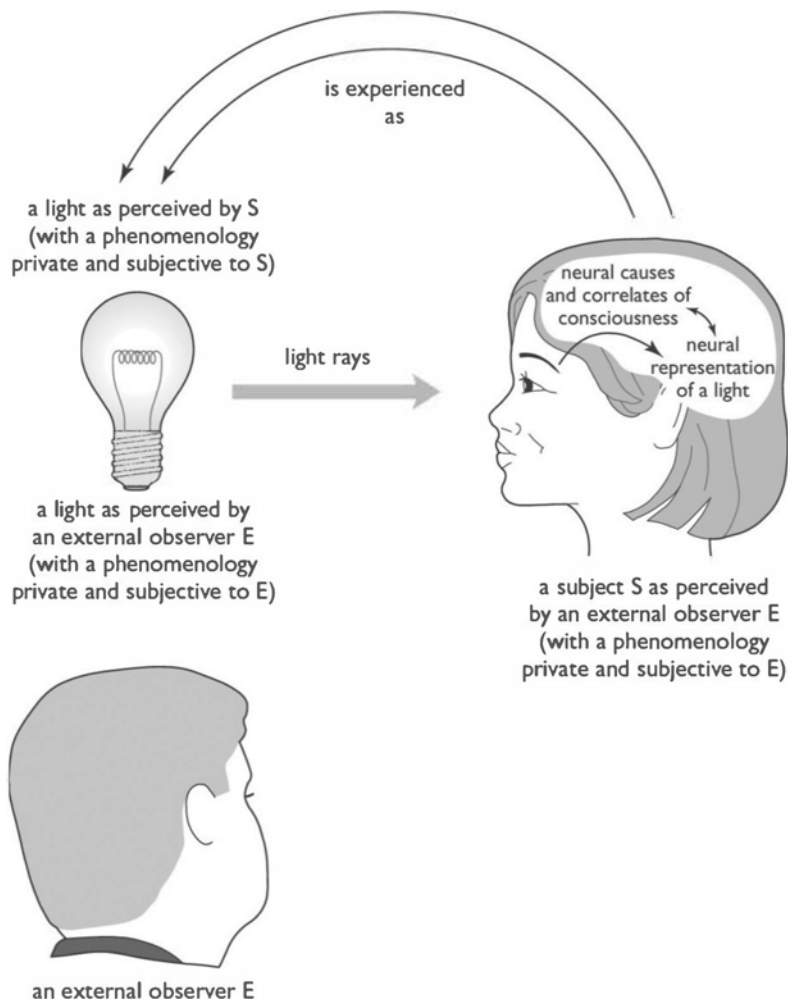


Figure 5.1. A reflexive model of a prototypical experimental situation in which an experimenter (E) “observes” a subject (S) who, in turn, “experiences” an external source of light. As the model demonstrates, in terms of *phenomenology* there is no actual difference in the subjective versus objective status of the light “experienced” by S and “observed” by E.

(© Max Velmans, 2009a, p. 211, Fig. 9.2, from Ch. 9, *Understanding Consciousness*, 2nd ed. By permission of Taylor & Francis.)

energy, neural representations of the information in the light within the subject’s brain, and any subsequent brain events that cause and/or correlate with S’s experience. However, E has no direct access to S’s visual experience (the problem of “other minds”). If he wants to find out what she experiences, he

has to ask her to describe it. Note that a description of her experience has to do with its *phenomenology*, not its ontology, and if S has normal vision, she should report that she sees a lightbulb out in the world—as Figure 5.1 shows. This situation is hardly surprising, as the observational arrangements that enable S to see the light are similar to those that enable E to see the light.¹⁰ Consequently, when she looks at the light, S sees more or less what E sees. Technically, this is a form of *phenomenological externalism*.

Note, however, that the reflexive model is not externalist (for any doctrinal reason) about all experiences. Whether an experience appears to be located in external phenomenal space, on the body surface, inside the head, or nowhere is an empirical matter that is entirely dependent on its phenomenology. For example, the phonemic imagery that accompanies the thought that $2 + 2 = 4$ does not have a clear location, or it might seem, at best, to be roughly located inside the head. We also have “inner” experiences, such as verbal thoughts, images, feelings of knowing, experienced desires, and so on. Such inner experiences really do seem to have a phenomenology of the kind that characterizes Descartes’s *res cogitans*. One might argue that verbal thoughts have a rough location in that they seem to be “in the head” (in the form of inner speech) rather than in one’s foot or freely floating out in space, but they are not clearly located in the manner of pains and lightbulbs. However, the reflexive process is the same. The cognitive processes that give rise to thoughts, feelings of knowing, and so on originate in the mind/brain, although these processes are unlikely to have a precise location insofar as they engage the mass action of large, distributed, neuronal populations. Consequently, insofar as these processes are experienced, they are reflexively experienced to be roughly where they are (in the head or brain).

There is far more to be said about conscious phenomenology and its relation to the brain and physical world (see, e.g., Velmans, 1990; 2000, Chapter 6; 2009a, Chapter 6). But if I am right so far, even a cursory examination of what we actually experience poses a fundamental challenge to dualist and reductionist presuppositions about what it is that they need to explain. Both dualism and reductionism assume experiences to be quite different from the perceived body and the perceived external world. Perceived bodies and worlds are assumed to be physical and out-there in space, while experiences of bodies and worlds are “nowhere” or in the brain. But the reflexive model suggests that this is a theoretical fiction. *In terms of phenomenology*, there is no actual separation between the perceived body and experiences of the body or between the perceived external world and experiences of that world. It goes without saying that when one has a conscious thought, there isn’t some additional experience of a thought “in the mind.” But neither is there a phenomenal pain “in the mind” (without location and extension) in addition

to the pain one experiences in the finger if one stabs it with a pin. And there isn't a phenomenal lightbulb "in the mind" in addition to the lightbulb one sees out in the world. Applying Occam's razor, the reflexive model gets rid of them—thereby undermining the very basis of the classical dualist versus materialist–reductionist debate!

However, the reflexive model does not get rid of conscious phenomenology. Thoughts, pains, and phenomenal lightbulbs are experienced to have very different "qualia" (along with different locations and extensions), but they are nevertheless aspects of what we experience. Together, such inner experiences, bodily sensations, and external experienced entities and events make up the contents of consciousness that form the everyday phenomenal world.¹¹ Such experienced phenomena may be thought of as biologically evolved mental models of their initiating causes that are sufficiently useful to serve the purposes of everyday life, although for other, deeper purposes, the sciences might describe those initiating causes in very different ways.¹² If this is correct, *there never was a separation between what we normally think of as the external physical world and what we normally think of as conscious experience*. Rather than being *apart-from* conscious experience, the perceived physical world is *part-of* conscious experience.

THE BEGINNINGS OF RM

It goes without saying that perceived and judged distances of events and objects in phenomenal space do not correspond, in every respect, to those in measured Euclidian space, although at proximal distances important for human survival, the correspondence is usually quite accurate. For example, the pain I feel when stabbed by a pin is usually very close to where the pin went in, but these correspondences break down at far distances. For example, the night sky appears to be a dome studded with stars, but the measured distances of the stars bear little relationship to their apparent distances. Nor does the phenomenal world correspond in many of its details to the world described by modern physics (in terms of quantum mechanics, relativity theory, and so on). However, it is the *everyday physical world that we can see* that we conventionally think of as public, objective, and observer independent in contrast to experiences of that world that are conventionally thought of as private, subjective, and observer dependent. The observation that this phenomenal physical world is actually *part-of* conscious experience therefore provides a very different departure point for an understanding of consciousness. It also provides the beginnings of RM, an integrative philosophical framework for understanding the relationships among consciousness, brain, and the

physical world that is as different from both dualism and reductive materialism as they are from each other. In its deeper aspects, RM also suggests how these manifest forms emerge from and reflect the nature of the broader universe that supports them. As it is not possible to present a full analysis of RM and its many consequences here,¹³ we will focus below on just those aspects that inform issues central to this volume.¹⁴

How the Phenomenal “Physical World” Relates to the World Described by Physics

RM adopts a form of *indirect (critical) realism* that treats the experienced phenomenal world as a form of virtual reality (Velmans, 1990, 1998b) that the mind/brain¹⁵ selects from the energies and events internal to and surrounding our bodies and models these into a representation of what is going on in a manner appropriate to biological survival. In Velmans (2000, Chapter 7; 2009a, Chapter 8), I give a detailed review of how the mind/brain system translates the energies described by physics into a world-as-experienced, so I will not repeat that review here. Suffice it to say that the data from physics, sensory physiology, perception, and psychophysics make it clear that the perceived world “models” only a selection of the events and energies that physics describes. The data from comparative psychology and zoology also suggest that the “physical reality” perceived by humans is only one of many possible perceived realities. The precise mix of sensory, perceptual, cognitive, and social capacities in each species is unique. Human sensory and perceptual systems perform broadly similar functions to those of other animals. But the sensitivity of sense organs, the range of energies to which they are tuned, and the way information detected by the sensors is subject to perceptual processing vary considerably from species to species. Consequently, the “physical reality” that we perceive is actually a species-specific, peculiarly human world. But it has no privileged status—and it is not reality itself.

How is this phenomenal world formed? Following current conventions in the psychology of perception, I assume that the mind/brain constructs a “representation” or “mental model” of what is happening based on the input from the initiating stimulus; expectations; traces of prior, related stimuli stored in long-term memory; and so on (see Rock, 1997). Such mental models encode information about the entities and events that they represent in formats determined by the sensory modality that they employ. Visual representations of the lightbulb in Figure 5.1, for example, include encodings for shape, location and extension, hue, brightness, and so on. In addition, I suggest that the way information (in a given mental model) appears to be formatted depends on the observational arrangements. The information appears in different forms

to the subject (S) and an external observer (E) for the reason that the means available to S and E for accessing the information in that mental model differ (Velmans, 1993b, 2017b).

An external observer, inspecting a subject's brain, has to rely on his own exteroceptive systems (typically vision) aided by physical equipment (positron emission tomography [PET], functional magnetic resonance imaging [fMRI], and so on). Viewed in this way (from this third-person perspective), a visual mental model in the subject's brain might appear in the form of neural activation in a series of relatively distinct feature maps distributed throughout the subject's visual system. We do not know precisely what is required to make such neural representations conscious. However, given the integrated nature of visual experiences, it is reasonable to assume that when such distributed neural activities do become conscious, they must be bound together in some way, perhaps through synchronous 40-Hz oscillations (Singer, 2013). We may also expect there to be observable (physical) influences on the pattern of activity embodied in the mental model from existing memory traces (corresponding to the effects of expectation, stored knowledge, and so on). Whatever the fine detail turns out to be like, viewed from E's perspective, the information (about the lightbulb) in S's mental model is likely to take a neural or other physical form. In terms of what E can directly observe of S's mental model, that is the end of the scientific story.

However, the observational arrangement by which the subject accesses the information in her own mental model is entirely different. As with E, the information in her own mental model is translated into something that she can observe or experience—but all she experiences is a lightbulb out in the world. While she focuses her attention on the lightbulb, she does not become conscious of having a “mental model of a lightbulb” in the form of neural states. Nor does she have an experience of a lightbulb “in her head or brain.” Rather, she becomes conscious of what the neural states represent—an entity out in the external world. *In short, in this situation, the information encoded in S's mental model (about the entity in the world) might be identical whether viewed by S or by E, but the way the information appears to be formatted depends on the perspective from which it is viewed.*

A Phenomenal World Hologram?

Let me illustrate with a simple analogy. Let us suppose that the information encoded in the subject's brain is formed into a kind of ‘neural projection hologram.’ A projection hologram has the interesting property that the three-dimensional image it encodes is perceived to be out in space, in front of its two-dimensional surface, provided that it is viewed from an

appropriate (frontal) perspective and is illuminated by an appropriate (frontal) source of light. Viewed from any other perspective (from the side or from behind), the only information one can detect about the object is in the complex interference patterns encoded on the holographic plate. In analogous fashion, the information in the 'neural projection hologram' is displayed as a visual, three-dimensional object out in space only when it is viewed from the appropriate, first-person perspective of the perceiving subject. And this happens only when the necessary and sufficient conditions for consciousness are satisfied (when there is 'illumination by an appropriate source of light'). Viewed from any other, external perspective, the information in S's 'hologram' appears to be nothing more than neural representations in the brain (interference patterns on the plate).

The 'projection hologram' is, of course, only an analogy,¹⁶ but it is useful in that it shares some of the apparently puzzling features of conscious experiences. The information displayed in the three-dimensional holographic image is encoded in two-dimensional patterns on a plate, but there is no sense in which the three-dimensional image is itself "in the plate." Likewise, there is no sense in which the phenomenal lightbulb observed by S is "in her head or brain." In fact, the three-dimensional holographic image does not even exist (as an image) without an appropriately placed observer and an appropriate source of light. Likewise, the existence of the phenomenal lightbulb requires the participation of S, the experiencing agent, and all the conditions required for conscious experience (in her mind/brain) have to be satisfied. Finally, a given holographic image exists only for a given observer and can be said to be located and extended only where that observer perceives it to be! S's phenomenal lightbulb is similarly private and subjective. If she perceives it to be out in phenomenal space beyond her body surface, then, from her perspective, it *is* out in phenomenal space beyond her body surface.

Perceptual Projection

Unconscious mind/brain processes construct experienced realities in which our phenomenal heads appear to be enclosed within three-dimensional, phenomenal worlds, not the other way around. But the mental models that encode information about these three-dimensional experienced realities are "in the head or brain." Given this, and given that the hologram is just an analogy, how do phenomenal cats and other phenomenal objects perceived to be located and extended in space get to be out there? It is clear that nothing physical is projected by the brain. There are, for example, no light rays projected through the eyes to illuminate the world, contrary to the beliefs of ancient Greek thinkers such as Empedocles. Rather, "perceptual projection"

is a *psychological effect* produced by unconscious perceptual processing. Although these processes are not yet fully understood, they have been widely investigated (in various guises) by psychological science.

For example, there is convincing evidence that the experience of depth is, in part, a construction of the mind/brain—in cases of depth perception arising from cues arranged on two-dimensional surfaces in stereoscopic pictures, three-dimensional cinemas, holograms, and virtual realities—and I have reviewed the scientific evidence for perceptual projection in visual and various other sense modalities in Velmans (1990; 2009a, Chapter 6; 2018b). One can also study underlying processes such as the perception of and judgments about distance and location in space—standard topics in the psychology of perception that one can find in any introductory psychology textbook. One can study the cues or information in the light that contribute to depth perception (Hershenson, 1998), the neural structures that support it (e.g., Goodale, 2017; Goodale & Milner, 2004), and the various instances where depth perception breaks down (Robertson, 2004). One can also study how the judged metrics of phenomenal space relate to physical measurements of space (e.g., Lehar, 2003; Rudrauf et al. 2017) and how both of these relate to neural state space. Given that neural state space is (by definition) in the brain and that phenomenal state space is mostly outside the brain, an understanding of how neural state space relates to phenomenal state space also provides a *topology* of perceptual projection. In recent years, studies have also appeared of how the mind/brain constructs a sense of *self-location* within a three-dimensional phenomenal world that appears in the form of a vantage point from which that world can be viewed (Pereira, 2018; Rudrauf et al., 2017; Trehub, 2007).¹⁷

As I have suggested in Velmans (2000, 2009a), a fuller understanding of perceptual projection also offers a more unified understanding of a wide range of phenomena experienced to have both location and extension, including phenomena as diverse as lucid dreams, hallucinations, eidetic imagery, the creation of virtual realities, the construction of a normal body image, out-of-body experiences, imaginal worlds, and the normal perception of events in three-dimensional space. Accepting perceptual projection as a normal effect (when perceptual processes form representations of events in the world) also makes it easier to understand what happens in artificial or pathological situations. For example, the three-dimensional virtual worlds created by virtual reality systems can be understood to arise from artificial stimulation of the same projective processes that create normal, phenomenal worlds. Hallucinations can be understood to result from mental models that erroneously project information that has an internal rather than an external origin (consequent on a breakdown of the usually reliable modeling of internal versus external events). And projection, transference, and countertransference of the kinds

that arise in therapeutic interactions can be understood as similar internal/external confusions in which information about one's own feelings, thoughts, or past experiences are bound into one's projected experience of another human being. As the processes that achieve "binding" and "projection" operate *preconsciously*, one literally experiences others as manifesting the traits and qualities that in reality are one's own.

Note that this analysis of *how* projected experiences are formed remains neutral about the *ontological status* of the entities and events represented by such experiences. This applies equally to ordinary experiences of the phenomenal world, hallucinations, and extraordinary experiences that may or may not represent autonomously existing states of affairs. As pointed out earlier, RM adopts a form of indirect (critical) realism in which all experiences are "psychologically real" but may or may not represent autonomously existing entities and events—and even if they do, they may do so imperfectly and incompletely in a species-specific way.¹⁸ By the same token, the veridical nature of a given, unusual experience cannot be dismissed simply on the grounds that it is unusual or by virtue of its dependence on the operation of prior, preconscious, mind/brain processes. Rather, following normal scientific procedure, one has to rely on triangulating evidence, whether such experiences (under given observation conditions) can be intersubjectively shared, the plausibility of alternative explanations for such experiences, and so on. We return to this issue in the discussion of mystical experiences toward the end of this chapter.

RM AND THE NATURE OF MIND

As noted in the introduction to this chapter, nearly all modern writings on the relation of mind and consciousness to the brain and physical world adopt implicit or explicit presuppositions about the fundamental nature of reality that both constrain and provide a point of departure for their analyses. Current Western philosophy and psychology largely assume the nature of reality to be composed of physical stuff and seek to understand mind and consciousness entirely in terms of the properties and behavior of that stuff. In contrast, Eastern philosophies and psychologies within the Vedanta tradition often posit the ultimate nature of reality to be "pure consciousness" and the concrete physical features of the world to be lower-order manifestations of that consciousness.¹⁹ RM eventually arrives at the intermediate view that the nature of mind and the embedding universe might be better thought of as *psychophysical*. However, it does not *presuppose* this or adopt this as a point of departure for its analysis. Rather, it starts once again with the simple reflexive model of perception introduced earlier.

So far, we have examined the status of S's *experience* of the lightbulb only in relation to E's experience of the entire experimental situation, including whatever he can observe going on in S's brain. But what of the status of S's *mind*? Is this nothing more than a state or function of S's brain, as E, if he is a reductive materialist, might claim?

Let us return again to the situation in Figure 5.1, where S experiences a lightbulb out in the world and E has access to the neural and/or other physical causes and correlates of S's experience. Suppose as before that for each distinct experience, a distinct set of physical causes and correlates could be found and that in the case of the lightbulb, there is a perfect correlation between S's experience and the brain events that E can observe.²⁰ Would that establish S's experience to be nothing more than (ontologically identical to) the brain events observed by E? No—for the simple reason that causation, correlation, and ontological identity are very different relationships (see above). In any case, in this situation, *both* S and E experience something out in the world that they would describe as "physical." S has a visual experience of a lightbulb, located beyond her body, in the world. E has a visual experience of the physical correlates of S's experience, located beyond E's body, in S's brain.

As shown above, what S and E can see in this situation might nevertheless relate to each other in a very precise way. S experiences a phenomenal lightbulb—a visual representation containing information about the shape, size, location, hue, and brightness of an entity that currently exists out in the world beyond her body surface. E might see the same information (about the lightbulb) encoded in the physical correlates of what S experiences in her brain. Under these circumstances, the *information structure* of what S and E observe would be identical, although it is displayed or "formatted" in very different ways. The way information (about the entity in the world) is displayed appears to be very different to S and E for the reason that the observational arrangements by which they access that information are entirely different. From E's external, third-person perspective, he can access the information encoded in S's neural correlates only by means of his visual or other exteroceptive systems, aided by appropriate equipment. Because S *embodies* the information encoded in her neural correlates and it is already at the interface of her consciousness and brain, it displays "naturally"²¹ in the form of the lightbulb she experiences.

S experiences a lightbulb rather than her neural encodings of the lightbulb for the reason that it is the information *about the world* (encoded in her neural correlates) that is manifest in her experience rather than the embodying format or the physical attributes of the neural states themselves. E observes/experiences the neural encodings of the lightbulb in S's brain (rather than

the lightbulb) for the simple reason that his visual attention is focused on S's brain, not the lightbulb. If he wanted to experience something similar to what she experiences, he would have to shift his attention (and gaze) away from S's brain to the lightbulb. (For a more detailed discussion of the consequences of "changing places," see Velmans, 2009a, p. 212.)

From E's "external observer's perspective," can he assume that S's experience is really nothing more than the physical correlates of her experience? From his external perspective, does he know what is going on in S's mind/brain/consciousness better than she does? Not really. E knows something about S's mental states that she does not know (their physical embodiment). But S knows something about them that E does not know (that these mental states are manifest as a visual experience). One needs both S's first-person story and E's third-person story for a *complete* account of what is going on.

A straightforward way to make sense of this situation is to assume that there is one underlying entity or process (S's mind) that grounds and connects the two forms of knowledge that E and S have of it—a position that can be formally described as a form of *ontological monism combined with epistemological dualism* in which first- and third-person observable aspects of the mind are complementary and mutually irreducible.

What is mind really like? As Einstein puts it, "In our endeavor to understand reality we are somewhat like a man trying to understand the mechanism of a closed watch. He sees the face and the moving hands, even hears its ticking, but he has no way of opening the case" (Einstein & Infeld, 1938, p. 31). One can of course try to develop better instruments to make more refined observations.²² However, beyond the limits of observation, one can make only "best conjectures."

If mind grounds and unifies the first- and third-person knowledge we have about it, what can we conjecture about its nature?

- Insofar as conscious experiences are of something or about something, it is reasonable to suppose that they and their neural correlates encode information (see above). If so, the mind encodes information.
- To the extent that brain activities and accompanying experiences are fluid and dynamic, the mind can be described as a process, developing over time.

Taken together, these points suggest that mind can be thought of as a form of information processing, and the information displayed in experiences and their physical correlates can be thought of as two manifestations of this information processing—which makes this a *dual-aspect theory of information processing*.

However, this does not fully specify the ontology of the mind. Information processing needs to be encoded in some medium that is capable of carrying out that processing. Given this, what kind of medium is the mind?

One can give a very short list of the observable facts:

- In the normal human case, minds viewed from the outside seem to take the form of brains (or some physical aspect of brains).
- Viewed from the perspective of those who embody them, minds take the form of conscious experiences.

If first- and third-person perspectives (on the mind) are complementary and mutually irreducible, then the nature of the mind is revealed as much by how it appears from one perspective as the other. If so, the nature of mind is not *either* physical *or* conscious experience (as normally understood); it is at once physical *and* conscious experience. For lack of a better term, we may describe this nature as *psychophysical*. If we combine this characteristic with the features above, we can say that the human mind is a psychophysical process that encodes information, developing over time.

Although arrived at independently, this psychophysical form of dual-aspect monism is intriguingly similar to that originally formulated by Gustav Fechner (1860), which led him to develop *psychophysics*, the oldest (and still ongoing) research program in experimental psychology. There are also tempting convergences with physics. For example, following on his private discussions with Carl Jung, Wolfgang Pauli (one of the founders of quantum mechanics) came to the conclusion that

for the *invisible reality* of which we have small pieces of evidence in both quantum physics and the psychology of the unconscious, a *symbolic* psychophysical unitary language must *ultimately* be adequate, and this is the far goal to which I actually aspire. I am quite confident that the final objective is the same, independent of whether one starts from the psyche (ideas) or from physis (matter). Therefore, I consider the old distinction between materialism and idealism as obsolete. . . . It would be most satisfactory if physis and psyche could be conceived as complementary aspects of the same reality. (cited in Atmanspacher & Primas, 2006, p. 24)

Modern physics also offers some tempting, rough analogies for such a theoretical approach. One analogy to how consciousness and its neural correlates might be dual manifestations of an underlying *psychophysical* mind would be the way in which electric and magnetic fields are thought to be manifest aspects of *electromagnetism* in the manner described by Maxwell's equations. Another analogy to the way psychophysical mind underlies its manifest

conscious and material aspects would be how the dual nature of photons and electrons is conceived as a neutral system state that manifests itself as either wavelike (interference patterns) or particle-like (clicks in a Geiger counter) under different experimental arrangements. As with the psychological dual-aspect monism described earlier, physics struggles to find a descriptive term for the underlying state that somehow combines both observable aspects—for example, describing photons as “wave packets” or electrons as “electron clouds.” And, as with psychological complementarity, wave and particle aspects are viewed as complementary and mutually irreducible.²³

THE EVOLUTION AND DISTRIBUTION OF CONSCIOUSNESS

The above examination of mind and its relationship to consciousness and brain focuses on humans. But what is the wider distribution of consciousness, and from what did it evolve? Once again, I do not have space to present a full analysis of these important questions (along with the usual evidence, arguments, and critique of alternatives) here.²⁴ In what follows, I do, however, provide a very brief summary of the run of the arguments from an RM perspective, as this provides a basis for assessing the extent to which an understanding of mind and consciousness in humans might, at least in principle, be extrapolated to mind and consciousness at large.

In contemporary culture, it is widely assumed that the existence of consciousness is a product of Darwinian evolution. Darwinian theory is a *functional* theory. Stripped down to its essence, it has only one explanatory mechanism: novel biological forms and functions emerge through random variation of genes and persist only if in some way they enhance the ability of organisms (or populations of organisms) to propagate their genes. Given this, for evolutionary theory to explain the existence of consciousness, it must show (1) *how* consciousness emerged through random variation in the genome of organisms in which it was previously *entirely absent* and (2) how the emergence of various forms of consciousness enhanced the ability of those organisms to propagate their genes.

Given the problems with materialist reductionism in either its physicalist or its functionalist versions (see above), it is well understood that (1) presents a “hard problem” sometimes described as the problem of “brute emergence” in contemporary philosophy of mind, which has been much discussed in the consciousness studies literature, so I won’t repeat that discussion here. However, it is worth noting that, on current evidence, there appears to be nothing special about the internal structure of brain cells

that might make them uniquely responsible for mind or consciousness. As Charles Sherrington (1963) pointed out,

A brain-cell is not unalterably from birth a brain-cell. In the embryo-frog the cells destined to be brain can be replaced by cells from the skin of the back, the back even of another embryo; these after transplantation become in their new host brain-cells and seem to serve the brain's purpose duly. But cells of the skin it is difficult to suppose as having a special germ of mind. Moreover cells, like those of the brain in microscopic appearance, in chemical character, and in provenance, are elsewhere concerned with acts wholly devoid of mind, e.g., the knee-jerk, the light-reflex of the pupil. A knee-jerk "kick" and a mathematical problem employ similar-looking cells. With the spine broken and the spinal cords so torn across as to disconnect the body below from the brain above, although the former retains the unharmed remainder of the spinal cord consisting of masses of nervous cells, and retains a number of nervous reactions, it reveals no trace of recognizable mind. . . . Mind, as attaching to any unicellular life would seem to be unrecognizable to observation; but I would not feel that permits me to affirm that it is not there. Indeed, I would think, that since mind appears in the developing source that amounts to showing that it is potential in the ovum (and sperm) from which the source springs. The appearance of recognizable mind in the source would then be not a creation *de novo* but a development of mind from unrecognizable into recognizable. (p. 251)

It is less well understood that there are similar problems with (2). As noted in the brief summary of how everyday conscious experiences actually relate to the details of human information processing (in Velmans, 1991a) above, a *consistent association* of phenomenal consciousness with a given form of processing does not warrant the *reduction* of that experience to that processing. Conversely, the adaptive functions carried out by that processing cannot be attributed to its associated consciousness. One should also recognize that even a criterion for the existence of consciousness based on the ability to respond or adapt to the world is entirely arbitrary. It might, for example, be like something to *be* something regardless of whether one *does* anything! Panexperientialists such as A. N. Whitehead have suggested that there is no arbitrary line in the ascent from microscopic to macroscopic matter at which consciousness suddenly appears out of nothing. Rather, elementary forms of matter may be associated with elementary forms of experience. And if they encode information, they may be associated with rudimentary forms of mind.

Where then should one draw the line between entities that are conscious and those that are not? Theories about the distribution of consciousness divide into *continuity* and *discontinuity* theories. Discontinuity theories all claim that consciousness emerged at a particular point in the evolution of

the universe. They merely disagree about which point. Consequently, discontinuity theories all face the same problem. What switched the lights on? What is it about matter, at a particular stage of evolution, that suddenly gave it consciousness? As noted earlier, most try to define the point of transition in functional terms, although they disagree about the nature of the critical function. Some think that consciousness “switched on” only in humans (for example, once they acquired language or a theory of mind). Some believe that consciousness emerged once brains reached a critical size or complexity. Others believe that it co-emerged with the ability to learn, or to respond in an adaptive way to the environment.

However, such theories confuse the conditions for the *existence* of consciousness with the conditions that determine the many *forms* that it can take. Who can doubt that verbal thoughts require language or that full human self-consciousness requires a theory of mind? Without internal representations of the world, how could consciousness be *of* anything? And without motility and the ability to approach or avoid, what point would there be to rudimentary pleasure or pain? But none of these theories explains what it is about such biological functions that suddenly switch on consciousness.

The Coevolution of Conscious Experiences With Their Associated Material Forms

Continuity theorists do not face this problem for the simple reason that they do not believe that consciousness suddenly emerged at *any* stage of evolution. Rather, as Sherrington suggests above, consciousness is a “development of mind from unrecognizable into recognizable.” On this *panpsychist* or *panexperientialist* view, all forms of matter have an associated form of consciousness (see readings in Brüntrup & Jaskolla, 2017; De Quincy, 2002; Seager, 2020; Skrbina, 2009, 2020; Weber & Desmond, 2008; Weekes, 2012). In the cosmic explosion that gave birth to the universe, consciousness co-emerged with matter and coevolves with it. As matter became more differentiated and developed in complexity, its associated consciousness became correspondingly differentiated and complex. The emergence of carbon-based life forms developed into creatures with sensory systems that had associated sensory “qualia.” The development of *representation* was accompanied by the development of consciousness that is *of* something. The development of *self-representation* was accompanied by the dawn of differentiated self-consciousness and so on. On this view, evolutionary theory can in principle account for the different *forms* that consciousness takes. But consciousness, in some primal form, did not emerge at any particular stage of evolution. Rather, it was there from the

beginning. Its emergence, with the birth of the universe, is neither more nor less mysterious than the emergence of matter and energy.

In the absence of anything other than arbitrary criteria for when consciousness suddenly emerged, continuity theory is arguably more elegant. Continuity in the evolution of consciousness favors continuity in the distribution of consciousness, although there may be critical transition points in the *forms* of consciousness associated with the development of life, representation, self-representation, and so on.

WHAT CONSCIOUSNESS DOES

However, that leaves an acute, residual problem: If consciousness does not enhance third-person observable, adaptive functioning, what does it actually do?²⁵ As noted earlier, conscious experiences are representations. Some experiences represent states of the external world (exteroceptive experiences), some represent states of the body (interoceptive experiences), and some represent states of the mind/brain itself (volitions, thoughts about thoughts, and so on). Experiences can also represent past, future, real, and imaginary events—for example, in the form of thoughts and images. Such global representations provide a useful, sufficiently accurate representation of what is or might be happening in the world.

Whatever their representational content, current experiences also tell us something important about the current state of our own mind/brain—that it currently has perceptions, feelings, thoughts, images, and so on of a given type and that it has formed current representations with that particular content as opposed to any others. For example, the thoughts and feelings that enter consciousness at a given moment “represent” the current state of our own cognitive and affective systems in that they reveal *which* of many possible cognitive and affective states are currently at the focus of attention in a reportable form.

In what sense do these contents of consciousness have the causal roles that we normally think them to have? *In everyday life, we behave as “naïve realists.”* Although our conscious representations of the world are partial, approximate, and species specific, we normally take the events we experience to *be* the events that are actually taking place, although sciences such as physics, biology, and psychology might represent the same events in very different ways. And for everyday purposes, the assumption that the world just *is* as we experience it to be serves us well.

If this analysis is correct, consciousness is intimately bound up with knowledge. When we are conscious of what is going on, we also *know* what

is going on. That said, consciousness in humans is not *coextensive* with either representation or knowledge. There are many forms of representation in the brain that are preconscious or unconscious. And we know how to carry out many sophisticated mental tasks, although knowledge of how the mind/brain analyzes information, stores it, retrieves it, transforms it, and controls the musculature to make some appropriate response has little (if any) manifestation in what we experience. A vast reservoir of knowledge about the world and about ourselves is also encoded in long-term memory. While some of this might become conscious, it largely remains unconscious even while it plays a role in ongoing adaptive functioning (in the interpretation of input, the creation of expectations, the planning of appropriate responses, and so on). That is, representation and knowledge may be *either* conscious *or* unconscious.

Given this, what does consciousness *add* to existence? Suppose we take it away and leave everything else intact. Imagine another universe that is exactly like the one we inhabit with just one fundamental change. Imagine that it has a planet with an earth, sea, sky, and living creatures just like ours. It also has what appear to be human beings who, viewed from an external observer's perspective, seem just like us. Even their brains appear to operate in the same way. Representations at the focus of their attention are processed differently from nonattended ones, and the neural events that correlate with consciousness (in us) encode information about the world, body, and mind/brain, just as we would expect. However, *their* "neural correlates" are not accompanied by conscious experiences. In their universe, the mind is entirely physical, not psychophysical.

To "psychophysical" like us, such "physicals" might be impossible to detect, as, viewed from our third-person perspective, their lack of consciousness would not show. Behaviorally, there would be nothing to distinguish their intelligence or skill from ours. And close inspection of their brains would reveal information encoded, stored, and transformed in the normal way even though none of this results in a conscious experience. Unlike robots constructed out of silicon that merely simulated our behavior perfectly, such "physicals" would be indistinguishable from us both functionally and physically.²⁶

So, what is missing? Without behavioral or functional means for distinguishing "physicals" from ourselves, we can only imagine *what it would be like to be* entirely "physical." Leaving our physical and functional structure intact, we can, in our imagination, strip consciousness away. If we do, the lights go out. Although we would continue to inhabit and interact with a world, we would not *experience* ourselves to be living in a world. While retaining perfect, functional "blindsight,"²⁷ without visual experience we would not see the shape of the earth or the light and color of the sky. While retaining the ability to recognize auditory patterns, we would hear no sound of the wind

or of human voices. While maintaining our survival skills, we would feel neither pain nor bodily pleasure. And, although we might have a “self-model” that distinguishes us from other creatures and locates us in surrounding space, we would have no awareness of ourselves. We would experience no thoughts or emotions, and we would dream no dreams. *No greater loss is imaginable.* But in a purely physical, functional world, this would be no loss at all.

Knowing what it is like to see the beauty in someone’s eyes or hear the nightingale at dawn is a distinct form of knowledge. It differs from abstract knowledge (or “knowledge by description”) in a very obvious way. One can know the sorrow of losing a child only if this sad event actually happens. One can know what it is like to feel inspired only if blessed by an actual inspiration. And one can read about love in innumerable books and scientific papers—but this becomes subjectively real only if one experiences it for oneself. This, I suggest, gets to the heart of the matter. It is only when we *experience* entities, events, and processes for ourselves that they become *subjectively real*. It is through consciousness that we real-ize²⁸ the world. As said in Vedanta philosophy, *consciousness acts as a witness*, and that—and that alone—is its function.

If we combine this analysis of what consciousness does with how it co-evolves with its associated material forms, we can express their relationship in terms of a simple, complementary principle: “Consciousness and matter are intertwined in mind. Through the evolution of matter, consciousness is given *form*. And through consciousness, the universe is *real-ized*” (Velmans, 2000, p. 280; 2009a, p. 351). We return to this idea below.

HOW RM DIFFERS FROM BOTH DUALISM AND REDUCTIVE MATERIALISM

RM treats the reflexive, dual-aspect nature of the human mind as just one, natural manifestation of the universe in which it is embodied and embedded. For substance dualists, consciousness and its contents exist in an immaterial realm that has no location or extension in space. They form one part of a dual universe, the other part being the material world. In this vision, the extended, material world lies beyond the boundaries of consciousness and interacts with it. However, consciousness is not in any sense *contained* by the material world.

For contemporary reductive materialists, consciousness and its contents are nothing more than selected states or functions of the brain that have causal interactions with other, nonconscious states or functions of the brain. Viewed this way, consciousness and its contents form only a small part of the

physical universe and occupy little space. That is, conscious neural states (or functions) are parts of rather small brains that make up a minute proportion of the material of the earth, which is, in turn, a tiny fragment of an immense, nonconscious universe.

According to RM, the contents of normal phenomenal consciousness are neither *beyond* three-dimensional space (as dualists assume) nor contained *within* just a tiny bit of three-dimensional space (as materialists assume). Rather, these contents *define* and *fill* three-dimensional phenomenal space, as they are *none other* than the everyday phenomenal world, or the universe as normally experienced. What one experiences at a given moment depends, of course, on how one directs one's attention. Conscious contents differ enormously (for example, if one's eyes are open or closed). However, with open eyes, the contents of consciousness stretch to one's visual horizons. They include not just inner and body experiences but also the external phenomenal world that we conventionally think of as the "physical world."

Moreover, the normally experienced phenomenal world is only a partial, approximate, species-specific model of the greater universe described by physics and other sciences that *excludes* a far greater set of entities, events, and processes within the external world, body, and mind. Given their close linkage to consciousness, it is of particular significance that the *operations* of the mind/brain are largely nonconscious. Metaphorically, the contents of consciousness have often been likened to the tip of an iceberg. The bulk of the mind, like the iceberg, remains unseen below the water. The present analysis extends this metaphor. Once one expands consciousness to include the experienced body and surrounding phenomenal world, what is "above the waterline" is not just the tip of the iceberg but everything that one can experience extending to one's perceptual horizons. What is "below the waterline" expands correspondingly to include the entire universe of entities, events, and processes that, at a given moment, has no representation in what we experience.

In this vision, human consciousness is embedded in and supported by the greater universe (just as the tip of the iceberg is supported by the base and the surrounding sea). The contents of human consciousness are also a natural *expression* or *manifestation* of the embedding universe. In humans, the *proximal* causes of normal conscious experiences are to be found in the human brain, but it is a mistake to think of the brain as an isolated system. Its existence as a material macro-system depends totally on its supporting internal and external ground, and the contents of consciousness that it, in turn, supports arise from a reflexive interaction of perceptual processing with entities, events, and processes in the surrounding world, body, and the mind/brain itself.

This sketch of how consciousness fits into the wider universe supports a form of nonreductive RM. Human minds, bodies, and brains are embedded

in a far greater universe. Individual conscious representations are perspectival. That is, the precise manner in which entities, events, and processes are translated into experiences depends on the location in space and time of a given observer and the exact mix of perceptual, cognitive, affective, social, cultural, and historical influences that enter into the “construction” of a given experience. In this sense, each conscious construction is private, subjective, and unique. Taken together, the contents of consciousness provide a *view* of the wider universe, giving it the appearance of a three-dimensional phenomenal world. This results from a reflexive interaction of entities, events, and processes with our perceptual and cognitive systems that, in turn, *represent* those entities, events, and processes. However, such conscious representations are not the *thing-itself*.

In this vision, there is *one* universe (the *thing-itself*), with relatively differentiated parts in the form of conscious beings like ourselves, each with a unique, conscious view of the larger universe of which it is a part. Insofar as we are parts of the universe that, in turn, experience the larger universe, we participate in a reflexive process whereby the universe experiences itself.²⁹

A POTENTIAL BRIDGE BETWEEN EASTERN AND WESTERN UNDERSTANDING OF CONSCIOUSNESS AND MIND

As noted in the introduction, ancient Greek thinkers made no consistently clear distinctions between consciousness, mind, and soul. Indeed, for Aristotle (the father of functionalist reductionism), the ability to think (*nous*) is the one function that might survive bodily death³⁰—echoed two millennia later in the identification of “soul” and “consciousness” with *res cogitans* (a substance that *thinks*) by Descartes. In contemporary Western philosophy and science, discussions of “soul” have been left largely to theologians. However, “consciousness” frequently continues to be confounded with “mind.” This is ubiquitous, for example, in those materialist forms of psychofunctionalism and computational functionalism that reductively identify consciousness with mind understood as a form of information processing. And it is equally common in contemporary, reductive forms of idealism that attribute a given form of information processing or configuration of information/matter/energy to a function or attribute of consciousness. We return to this form of idealism at the end of this chapter.

Before doing so, however, it is important to note that one’s theory of how “consciousness” relates to “mind” also has immediate consequences for how one conceptualizes the relation of both consciousness and mind to the material world. For example, Descartes’s splitting of the universe into two

incommensurate substances (*res extensa* and *res cogitans*) forms the philosophical background for the classical “mind–body” problems in subsequent Western philosophy. How, for example, could substances as different as “extended substance” and “thinking substance” causally interact?

Similar problems are found in classical Hindu philosophy. For example, in Samkhya dualist philosophy, there is a somewhat similar bifurcation of the universe into *puruṣa* (consciousness) and (nonconscious) *prakṛti* (the source of all physical manifestation).³¹ However, “*mind*” (*manas*) is thought to be a manifestation of *prakṛti* that is distinct from consciousness—and the view that *manas* is physical is shared by monist Advaita Vedanta (Rao, 2011, 2012). Given that the mind is thought to be physical, Samkhya and Advaita Vedanta do not have a “mind–body problem” in the Western sense. But, arguably, they do have a “consciousness–body problem” (Velmans, 2013): Given the fundamental bifurcation of the universe into *puruṣa* and *prakṛti*, how could entities/energies as different as these causally interact?

In such East–West comparisons, it is also important to note that Western theories of mind and consciousness have evolved considerably over the past century—to the extent that the commonly understood meanings of the terms “mind” and “consciousness” have themselves evolved since the time of Descartes. As noted earlier, contemporary psychology commonly views mental processes as forms of *information processing* and the “mind” as the system that embodies that processing—typically a brain or perhaps a computer. Following on developments in psychodynamics and experimental investigation of mental processes, psychology also accepts that many mental processes are unconscious or preconscious. Given that operations of mind may or may not be accompanied by conscious experiences, consciousness is commonly thought of as a *state* or *property* of mind (which may or may not be manifest under given conditions).

It should be evident that if one adopts contemporary usages of the relevant terms, such East–West comparisons come out in a different way. The classical Vedanta view that the mind is a subtle form of physical information is, for example, consonant with the contemporary Western view that it can be thought of as a form of information processing that, in normal human mentation, is embodied in a physical system.

That said, a very sharp difference remains between such Eastern and modern Western, scientific views of consciousness and about the way that mind relates to consciousness. Western views of consciousness have been shaped largely by how this manifests in everyday human experience. For example, following on the writings of Brentano (1874), Western philosophers largely agree that a fundamental property of consciousness is that it is always *about* something,³² which distinguishes it from physical matter, which isn’t about

anything. Everyday conscious experiences also have phenomenal content with particular qualities (or “qualia”). Consequently, in order to disambiguate the many different natural language usages of the term “consciousness” in current Western scientific and philosophical writings, the term “consciousness” is often expanded to (or assumed to mean) *phenomenal consciousness*. As the appearance of consciousness in humans normally appears to be *dependent* on mind/brain processing, the mind and/or brain are also commonly thought of in the West as ontologically more *fundamental* than consciousness.

While philosophical/psychological writings in the Vedanta tradition entirely accept the existence of phenomenal conscious experiences that have been shaped by the workings of the mind and sensory systems, they do not take the view that these exhaust or even reveal the true essence of consciousness. For example, in Advaita Vedanta, these mentally conditioned phenomenal contents are said to *obscure* the actual source from which they arise—a form of pure, contentless consciousness that Rao (2012) describes as a “pure subjectivity,” also commonly described as *sat-cit-ānanda* (being-consciousness-bliss). According to Samkhya, consciousness is the true nature of *puruṣa* (which remains eternally distinct from *prakṛti*). According to Advaita Vedanta, such a pure consciousness is the nature of Brahman—the ultimate basis of *everything*, including the manifest material world. While in embodied human beings this state of pure consciousness both illuminates and is conditioned by the material mind/brain, according to Samkhya as well as Advaita Vedanta it does not *arise* from the mind/brain and cannot therefore be thought of as a property or state of it. Rather than being ontologically *dependent* on mind, it is viewed either as distinct from mind (in Samkhya) or as giving rise to mind, along with the rest of the material world (in Advaita Vedanta).

Consequently, dualisms in these Western and Eastern forms have generally been opposed by polar opposite forms of monism. Western materialist monists adopt the view that both material forms and our experience of them are ontologically physical. Eastern monism in the tradition of Advaita Vedanta adopts the view that the ultimate stuff of the universe is “consciousness *as-such*”—also characterized as “pure consciousness” and, by Rao (2011), as “pure subjectivity.” Material forms (including subtle ones, such as mind) are thought to be a concretization of that consciousness.

Unfortunately, both of these monist positions face a “hard problem.” It is well recognized in the West that physicalism (along with related positions such as functionalism) has no adequate account (and, many would say, no account at all) of how consciousness could arise from the activities of non-conscious, physical matter. How could the varied “qualia” of experience arise from the brain’s physical activity or interact with it? Although less well

recognized, Vedanta idealism faces the “inverse hard problem.” How could the autonomously existing material of the macro-physical world arise from or interact with something entirely nonphysical, characterized as “pure consciousness” or “pure subjectivity”?

On this issue, RM may have something to contribute. According to RM, the mind has dual (physical and experiential) aspects that can be known in, respectively, third- and first-person ways. How does that help to understand such East–West differences? Over the millennia, Western and Eastern thinkers have asked themselves the same question: What are the enduring, unchanging realities that underlie the ever-changing world of phenomenal appearances? Although many investigative methods have been developed in both the East and the West, the predominant methods used to address this particular question have been very different. The West has largely specialized in the development of third-person methods—and, using these methods, mind, body, and world all appear to be physical, and the unchanging, underlying realities are described by physical laws. By contrast, Eastern first-person methods (within both Samkhya and Advaita Vedanta) have focused largely on stilling the mind to the point where phenomenal content no longer appears in order to ascertain what, if anything, remains. As noted earlier, what remains has been variously described as a state of “pure consciousness,” “pure subjectivity,” or *sat-cit-ānanda*.

In short, RM suggests that one’s understanding of the ultimate nature of mind is conditioned by the investigative route one takes. If one pursues exclusively third-person methods, it is entirely understandable that this ultimate nature might appear to be physical. If one pursues purely first-person, yogic methods, it is entirely understandable that one might conclude that this ultimate nature is “pure consciousness”—and, through a direct experience of that state, to have realized that nature. However, RM is cautious about giving epistemic primacy to either investigative route. In viewing the mind as a psychophysical form of information processing, it honors observations made in both traditions, thereby occupying the middle ground of a potential East–West bridge. RM also suggests that the dual-aspect nature of the human mind exemplifies a more general, natural process within the embedding universe as such; that is, rather than being pure consciousness or purely physical, nature might be, in its depths, psychophysical (or neither purely psychological nor purely physical in the way that these terms are normally understood).

Intriguingly, more than a century ago, Swami Abhedananda, sent by Swami Vivekananda to disseminate Vedanta philosophy in the West³³ (but also exposed to Western thought), came to a similar conclusion:

The materialist theory is a logical blunder, because it is based on a confusion between the object and subject. It asserts that matter is objective, but at the

same time it tries to show that it is also the cause of the subject, which it can never be. “A” can never become “non-A.” Materialism begins with the idea that matter is objective, and ends in attempting to prove that this objective something has become the subjective mind, spirit or ego. It first takes for granted that matter is that which is perceived, or the cause of sensations, then it gradually claims to show that it produces that which feels the sensations, which is contradictory and absurd.

As materialism is onesided and imperfect, so is the spiritualistic or idealistic theory of the world, which denies the existence of matter or object, and says that everything is mind . . . that all is mind and that there is no matter, is as erroneous as the materialistic theory. Spirit or mind or ego, which is always the subject, can exist as perceiver or knower so long as there is an object of perception or knowledge. If we admit the existence of one, that of the other is implied. Therefore, Goethe was correct in saying: “Matter cannot exist and be operative without spirit or spirit without matter.”

The universal substance appears as possessing these two attributes of subject and object, of spirit, mind or ego and matter or non-ego. They are like the two modes of the one eternal substance, which is unknown and unknowable existence. . . . This substance is not many but one. All varieties of phenomena have come out of this one source, Brahman, and into it they will be reduced at the time of dissolution. It is the universal energy, the mother or producer of all forces. We know that all forces are related to one another and that they are, as modern science explains, the manifestations of the same eternal energy or the infinite substance. From this one source all mental and material forces have come into existence, and have evolved into various forms and shapes.

This is monism. (Abhedananda, 1905, pp. 22–24)

This is also very close to RM.

RM, COSMOPSYCHISM, AND THE SEARCH FOR ULTIMATES

Viewed from the perspective of recent developments in philosophy of mind, the above principles also make RM a dual-aspect, monist form of *cosmopsychism*, sharing many of its fundamental principles.³⁴ However, there are also some important differences, particularly in the means by which RM arrives at and justifies these principles (see above) and in the way that RM conceptualizes the relationship between consciousness, physical matter, and mind.

Cosmopsychism is a form of panpsychism. To account for the existence of consciousness without relying on a “magical” form of brute emergence, panpsychism (that everything has an element of mind) and panexperientialism (that everything has an element of experience) argue that mind and/or consciousness must be ontologically primary, extending even to microphysical entities. Some idealist versions also suggest that the micro-experiences

of microphysical entities combine in some way to produce the macro-experiences of macroscopic entities such as humans—a version of compositional panpsychism. Until recently, however, panpsychism and its related positions have been routinely dismissed by philosophers on the grounds that such combinations are unintelligible, a problem known as the “combination problem.”

The first and definitive statement of this problem is usually attributed to William James (1890). It is important to note, however, that in his formulation of the problem, James directed his critique at a version of idealist “mind-stuff” theory in which micro-experiences combine into compound macro-experiences—for example, that a “feeling of green” combines with a “feeling of red” to produce a “feeling of yellow” (where “feelings” for James correspond to “qualia” in modern philosophy of mind). As he notes,

Helmholtz has shown that if green light and red light fall simultaneously on the retina, we see the color yellow. The mind-stuff theory would interpret this as a case where the feeling green and the feeling red “combine” into the *tertium quid* of feeling, yellow. What really occurs is no doubt that a third kind of nerve-process is set up when the combined lights impinge on the retina,—not simply the process of red plus the process of green, but something quite different from both or either. Of course, then, there are no feelings, either of red or of green, present to the mind at all, but the feeling of yellow which *is* there, answers as directly to the nerve-process which momentarily then exists, as the feelings of green and red would answer to their respective nerve-processes did the latter happen to be taking place. (Vol. 1, p. 156n)

It is important to stress that James’s explanation of the combination problem does not deny the *existence* of micro-experiences. Rather, on the basis of color perception and other examples, he opposes a particular theory of how they combine—concluding that *self-compounding of mental facts is inadmissible* (p. 158). Macro-experiences are not compounds of simpler experiences. Rather, they are novel experiences whose integrated forms depend on physical integrative processes, which, in normal human experiences, involve neural processes³⁵—a view that is entirely consistent with current understanding in psychology and neuroscience. It is also entirely consistent with the analysis of how integrated phenomenal worlds are constructed in RM (see the discussion of perceptual projection and how conscious structures *coevolve with the physical forms and functions that support them* outlined above).³⁶

By contrast, within philosophy of mind, cosmopsychists deal with the combination problem by *inverting it*. Shani’s (2015) development of this position is particularly clear and has many resonances with RM as well as some instructive differences. So, we will examine it in detail. As he explains,

The first postulate of cosmopsychism is that the cosmos as a whole is the only ontological ultimate there is, and that it is conscious. In what follows I shall refer to this cosmic conscious entity as the absolute. Cosmopsychism presents an inverse picture to the standard view in contemporary panpsychism: instead of taking the smallest constituents known to science to be ontologically fundamental it identifies the absolute as the single ultimate reality. However, the core metaphysical commitment of panpsychism, namely, the contention that ultimates are bearers of consciousness, remains invariant amid this reversal of perspective.

The second theoretical commitment of the model is to priority monism . . . namely, to the view that the cosmos as a whole, is prior to its parts in the sense that every proper part of the cosmos depends on the whole, asymmetrically. On this view, the one is the ground of all things, all concrete entities, while the many exist in it, and through it, as “moments,” namely, as events of various durations, and as process configurations, i.e., systems or objects, of varying scales and of varying degrees of stability. Making the whole prior to the parts reverses our conception of which entities are basic, and it also implies that no part, big or small, is either immutable or separable from the rest of nature. (p. 408)

As Shani observes, this enables one to hold on to the idea that there is a plurality of subjects while maintaining that only the absolute is an ultimate subject and that all other subjects depend, for their existence, on the reality of the absolute. Note, however, that his identification of the absolute with *cosmic consciousness* makes this a form of idealism—a form of discontinuity theory that has to deal with the “inverse hard problem.” How could the apparent, autonomously existing material of the macro-physical world arise from or interact with something entirely nonphysical, characterized as “pure consciousness” or “pure subjectivity”?

While Shani does not discuss the “inverse hard problem” as such, he does note that his proposal (and other forms of idealist cosmopsychism) have to deal with the *decomposition* problem: How does an undivided whole such as cosmic consciousness decompose into its constituent parts—that is, into many subjects, each with its own individual perspective on the whole, manifest in the form of its own, individual, private experience? The mechanism he proposes is that of *partial grounding*—a metaphysical relationship of dependence between facts that, translated into causal structures, operates in roughly the following way: distinct entities are like semi-stable vortices within the primal ocean of consciousness. While all these structures have consciousness at their core (a grounding in universal consciousness), their component parts and overall macrostructure may or may not be conscious subjects, depending on their internal organization. For example, although both have macrostructures, humans are conscious, but tables are not—although, appropriately organized and informationally integrated, micro-components of tables might be.

To mark this contrast, Shani introduces a terminological distinction between two kinds of compound system: esonectic (from *eso*—inner and *nexus*—connection, binding) and exonectic (from *exo*—outer, external). An esonectic system is a compound whose micro-constituents are interrelated in such a manner that the system is cohesive in both its outward form and its unified conscious experience. By contrast, an exonectic system is a compound whole whose micro-constituents are woven together only on the outside: it has a cohesive exterior form, but it lacks internal integration and a macro-level experience to match its exterior form. Rather, the micro-experiences of its micro-components remain secluded from each other and do not bind together, resulting in a system that lacks unified subjectivity and whose behavior gives no indication that it contains pockets of consciousness. As Shani (2015) goes on to explain,

The esonectic-exonectic divide fits well with empirical knowledge regarding characteristic differences in material organization between prototypical conscious entities such as brain-endowed organisms and prototypical non-conscious entities such as minerals. Mentioning a few contrastive features should suffice to illustrate the point. Minerals are made of crystalline structural formations of remarkable uniformity and repetitiveness reflected on various scales (cells, lattices), the structural bonds binding their components together are rather strong (on the scale of millions of electron volts), and communication between spatially separated parts is virtually non-existent. In contrast, the corresponding trademark features of biological brains and bodies are the exact opposites: a remarkable variability of structural and functional components, weak structural bonds, and massive communication between components all over the system. All of these features are considered fundamental for macro-level consciousness. Weak structural bonds are necessary for flexible modification, regulation, and adaptation of processes, activities, and behaviours; while the combination of differentiation (through structural and functional variability) and integration (through global resonance and information transfer) is considered by many leading researchers to be a key characteristic of consciousness. (p. 420)

Like RM, Shani relates his cosmopsychism to later Vedic philosophy:

On the present account, cosmic consciousness is on par with the Vedic notion of pure consciousness in that, like the latter, it serves as a deeper layer of consciousness grounding the particular streams of consciousness of individual creatures. . . . Cosmic consciousness may be likened to the vacuum in quantum field theory. Just as the vacuum is really a plenum, constantly teeming with spontaneous activity, so *we may think of cosmic consciousness as an inner expanse constantly teeming with a spontaneous buzz of qualitative feel* [emphasis added]. And just as the vacuum serves as a relatively homogenous background against which local field excitations, and patterns thereof, are discerned as

events and entities (i.e., as the particles and systems of our world) so we may think of cosmic consciousness as a background against which local interference patterns are discerned as phenomenal states. (p. 412)

It should be self-evident from this that to explain *how* an oceanic consciousness might differentiate into integrated, individualized conscious subjects, Shani gives examples of how *physical structures* are formed by fundamental physical energies that combine, interact, and integrate in formative ways to create those structures. But how do physical energies and structures as such come into being (the “inverse hard problem”)? According to Shani, the absolute has a concealed (enfolded, implicit) side—its oceanic consciousness, which cannot be known by ordinary means of knowledge and perception—and a revealed (unfolded, explicit) side, which, to creatures like us, embedded within that revealed side, takes on a physical appearance (see also Albahari, 2019; Kastrop, 2018, and Chapter 7 in this volume). As Shani notes, many other models of the absolute make a similar distinction—for example, panentheist systems that distinguish between a transcendent side of the absolute (beyond and ontologically prior to space and time) and an immanent side that interpenetrates the whole of manifest being. Although I have not made this explicit in my previous writings, this distinction is also implicit in RM. However, this point alone does not really address the inverse hard problem. According to Shani, “We may think of cosmic consciousness as an inner expanse constantly teeming with a spontaneous buzz of qualitative feel.” From such qualia, one can envisage how the mind/brain could, in principle, construct the *appearances* of macrophysical objects. But, unless they are hallucinations, we have every reason to believe that macrophysical objects are not just appearances. Rather, appearances *represent* entities, events, and processes that continue to exist (in a semi-stable fashion) whether or not we continue to experience them. That is how we distinguish a hallucination from what we judge to be “real.” So, *how, from a “buzz of qualitative feel,” is it possible to create physical energies and interactions, microparticles, and, in the macro-world, semi-stable material objects?*

RM takes an entirely different approach to this issue. Rather than adopting idealism, RM adopts a form of indirect (critical) realism that suggests that both idealism and realism are true. But they are true about different things. Idealism (in the sense of *to be is to be perceived*) applies to experienced, phenomenal worlds whose existence depends on the moment-to-moment, mental modeling of conscious agents. However, realism is true of the entities, events, and processes that are represented by such models (see Velmans, 1990; see also the sections “How the Phenomenal ‘Physical World’ Relates to the World Described by Physics” and “Perceptual Projection” earlier in this chapter).

RM also suggests that, rather than consciousness *producing* physical energies and interactions, *it is through the material world that consciousness is given form* (see above). For example, both combination and decomposition processes operate within macroscopic human brains in the way that subpopulations of activated cortical neurons combine and decompose through their synchronous activity to form momentarily dominant coalitions that support associated, momentary, unified, conscious experiences (Singer, 2013). Significantly, sectioning the corpus callosum not only separates much of the cortical functioning of the left and right cerebral hemispheres but also appears to decompose an originally unified consciousness into a distinct left- and right-hemisphere consciousness (see in particular Sperry, 1984; see also discussions in Colvin, Marinsek, Miller, & Gazzaniga, 2017; Zaidel, Jacoboni, Zaidel, & Bogen, 2003)! Following the same principle, one would expect microscopic forms of physical organization to shape micro-experiences (along the lines that Shani suggests) and subtler forms of physical organization to shape veridical, extraordinary experiences (see below).

Of central importance, RM also takes a different approach to the relationship between consciousness and mind with direct consequences for how one might think of the relationship of “cosmic consciousness” to “cosmic mind.” Like the classical Western philosophers and most current panpsychists, Shani (2015) makes no consistently clear distinctions between consciousness and mind³⁷—and consequently between cosmic consciousness and cosmic mind. For example, although his analysis of cosmopsychism explicitly posits the absolute to be “cosmic consciousness,” he explains that “while panpsychism does not imply that all concrete systems possess minds of their own, it entails that the most fundamental systems, the ultimates of nature, do. This, in turn implies that mind has an irreducible presence at the very core of reality” (p. 391). In contrast, Vedanta and Samkhya philosophers viewed mind as a subtle form of physical information (see above)—a view that is entirely consistent with contemporary psychological and related sciences that treat the human mind as a form of information processing. As noted earlier, this latter approach has made it possible to gain detailed insights into how mental processes operate in selecting from available information, attending to what is most important, learning, remembering, thinking, communicating with others, and so on. This, in turn, makes it possible to examine how phenomenal consciousness *relates* to such functioning and to a fuller understanding of how “conscious mind” relates to “unconscious mind.” And this, in turn, allows one to be more precise about what consciousness actually *does*.

As did the Vedanta philosophers, RM concludes that consciousness acts primarily as a *witness*. It is only when one *experiences* entities, events, and processes directly that one can know them in a way that makes these *subjec-*

tively real. Everyday conscious experiences are also *representations*, shaped by evolution, to provide successful interaction with the world. Consequently, although our conscious representations (and interpretations) can be misleading and inaccurate, experienced causal relationships among internal and external states of affairs are usually sufficiently veridical to serve us well.

MYSTICAL EXPERIENCE AND THE GROUND OF BEING

In our efforts to comprehend the ground of being, we are, so to speak, attempting to “see through a glass, darkly.”³⁸ But that does not make the ground of being unknowable. We can approach it through various forms of first-person, inner exploration. We can also approach it through the third-person methods of modern physics and cosmology (in their quest for ultimates and a grand unifying theory that incorporates both quantum mechanics and relativity theory). And, like the ancient philosopher/psychologists, we can approach it conceptually (as we attempt here) to ask, “What kind of universe or primal conditions could, in principle, support the universe we now experience?”

According to RM, humans are direct expressions of the ground of being and remain embodied and embedded in it. Consequently, RM accepts that an inner journey can, in principle, be taken within conscious experience itself, from “what it is like to be” a macrocosmic human being to “what it is like to be” part of the fabric that grounds all being, of which we are an inextricable part. Although this latter possibility may seem to be pure fantasy to those who adopt a materialist–reductionist worldview, such journeys have been undertaken by shamans, sages, contemplatives, and mystics over millennia using a range of consciousness-exploring and consciousness-altering techniques. Of course, not all the altered states of consciousness produced by such inner explorations are mystical or even benign (see extensive reviews in Cardeña, Lynn, & Krippner, 2014; Larøi et al., 2014; Ludwig, 1966). However, of the benign altered states of consciousness, mystical experiences are, perhaps, the most extraordinary and transformative. Already well explored by William James (1902), his “Lectures XVI and XVII on Mysticism” are as relevant and thoughtfully balanced as any contemporary writings on the subject (for excellent reviews of the current literature, see Kelly & Grosso, 2007; Marshall, 2015; Wulff, 2014). Following on the discovery of LSD by Albert Hofmann in 1938 and ethnobotanical explorations of the use of naturally occurring substances such as mescaline, psilocybin, and ayahuasca, extensive investigations of altered states of consciousness, including those that can be classified as mystical, have also been given added impetus by the use of consciousness-transforming drugs, which, taken with appropriate mind-sets in appropriate

settings, appear to foster mystical-type experiences that can be studied under controlled conditions.³⁹

What are we to make of such experiences and their consequent reports? As James (1902) noted in his early seminal writings on this subject, mystical experiences have an “absolutely sensational” epistemic and unitive quality along with profoundly positive transformative effects on those who have them that clearly distinguish them from psychotic experiences. They appear to give direct “insights into depths of truth unplumbed by the discursive intellect” in the same way that ordinary experiences appear to give direct insights into conventionally understood states of affairs in the world. And, “looking back on my own experiences, they all converge toward a kind of insight to which I cannot help ascribing some metaphysical significance. The keynote of it is invariably a reconciliation. It is as if the opposites of the world, whose contradictoriness and conflict make all our difficulties and troubles, were melted into unity” (p. 388).

Despite having experienced such states (with the assistance of nitrous oxide) and been deeply influenced by them, James is meticulously evenhanded about how to interpret them. Reports of mystical experiences from different cultural settings and practices vary widely in their details, and many extraordinary experiences accompanied by equally strong convictions are reported in various forms of psychopathology. Given this, James (1902) entirely accepts that those who have not experienced mystical experiences are under no obligation to accept their veracity or authority. Although such experiences “forbid a premature closing of our accounts with reality,” they “cannot furnish formulas,” and “they fail to give a map” (p. 388).

This applies equally, of course, to normal, veridical experiences that give immediate insight into states of affairs in the world and even into the operations of our own minds without in themselves furnishing formulas or providing a map. For this, we need the assistance of our ability to conceptualize and theorize, assisted by third-person investigative methods employed by physics and related sciences (applied to the external world) and by psychology and related sciences (applied to the operations of our own minds).

That said, many mystical experiences are quite detailed and suggestive, and nearly all reviews of the literature suggest that such experiences have a common core, thereby demonstrating a degree of intersubjectivity—a precondition for their acceptance within consensually shared knowledge (see Grof, 1998; Huxley, 1945; James, 1902; Kelly & Grosso, 2007; Marshall, 2015; Otto, 1932; Stace, 1960; Wulff, 2014). It is not possible to summarize this vast literature in a few paragraphs, so we focus here on just a few core features that bear directly on how to conceptualize the relations among consciousness, mind, and the physical world.

Of the researchers who have actively explored these core features, none is more experienced than the psychiatrist Stanislav Grof—and his review of the phenomenology of such experiences in his 1998 book *The Cosmic Game* is instructive. Grof notes that in the context of his psychiatric practice, he has personally conducted and recorded more than four thousand psychedelic sessions with clients using substances such as LSD, psilocybin, mescaline, dipropyl-tryptamine (DPT), and methylene-dioxy-amphetamine (MDA) and had access to the records of more than two thousand sessions conducted by his colleagues (Grof, 1998, p. 9). Together with his wife, he also supervised more than thirty thousand holotropic breathwork sessions (mostly with non-clinical groups) that can have similar effects. Given that much of the work with psychedelics was carried out in the context of his work as a clinician, the range of reported experiences (from challenging and terrifying to illuminating and healing) is immense. In this book, however, he focuses on just those experiences and observations that relate to basic ontological and cosmological questions. These include experiences that, to those who have them, appear to be direct experiences of the absolute. While such experiences cannot be adequately conveyed in words, particularly to those who have not had them, the available descriptions appear to have a direct bearing on how “cosmic consciousness” might relate to “cosmic mind”—an issue of direct relevance to RM’s dual-aspect monism. Intriguingly, Grof notes that reported experiences of the absolute come in two basic types.

To illustrate the first type, Grof (1998) includes the following report written by Robert, a thirty-seven-year-old psychiatrist:

The beginning of my experience was very sudden and dramatic. I was hit by a cosmic thunderbolt of immense power that instantly shattered and dissolved my everyday reality. I completely lost contact with the surrounding world; it disappeared as if by magic. . . .

At that time, my only reality was a mass of swirling energy of immense proportions that seemed to contain all of Existence in an entirely abstract form. It had the brightness of myriads of suns, yet it was not on the same continuum with any light I knew from everyday life. It seemed to be pure consciousness, intelligence, and creative energy transcending all polarities. It was infinite and finite, divine and demonic, terrifying and ecstatic, creative and destructive . . . all of that and much more. I had no concept, no categories for what I was witnessing. I could not maintain my sense of separate existence in the face of such a force. My ordinary identity was shattered and dissolved; I became one with the Source. Time lost any meaning whatsoever.

In retrospect, I believe I must have experienced the Dharmakaya, the Primary Clear Light, that according to the Tibetan Book of the Dead, the *Bardo Thodol*, appears at the moment of death. (p. 27)

As Grof goes on to report, the second type of experience that appears to satisfy those searching for ultimate answers is surprising in that it does not have any specific content. "It is the identification with Cosmic Emptiness and Nothingness described in the mystical literature as the Void" (p. 30). However, this Cosmic Void is far from everyday experiences of emptiness or nothingness. Rather,

when we encounter the Void, we feel that it is primordial consciousness of cosmic proportions and relevance. We become pure consciousness aware of absolute nothingness; however, at the same time, we have a strange sense of essential fullness. This cosmic vacuum is also a plenum, since nothing seems to be missing in it. While it does not contain anything in a concrete manifest form, it seems to comprise all of existence in a potential form. In this paradoxical way, we can transcend the usual dichotomy between emptiness and form, or existence and nonexistence. However, the possibility of such a resolution cannot be adequately conveyed in words; it has to be experienced to be understood. (p. 30)

Grof also notes that on several occasions, people who experienced both the "Absolute Consciousness" and the "Void" had the insight that these two states are essentially identical and interchangeable despite being experientially distinguishable and, apparently, conceptually incompatible. Sometimes Absolute Consciousness appeared to emerge from the Void, and sometimes the Void seemed to emerge out of Absolute Consciousness (p. 32).

In what way might this be relevant to RM? As noted in the above analysis, RM splits the difference between seemingly opposed, materialist and idealist forms of monism. Materialism adopts a linear theory of manifestation: physical matter \rightarrow mind \rightarrow consciousness. Idealist versions of cosmopsychism adopt an inverse, linear causal theory of manifestation: either consciousness \rightarrow mind \rightarrow physical matter, as in Advaita Vedanta,⁴⁰ or, in versions of cosmopsychism that do not distinguish consciousness from mind, consciousness/mind \rightarrow physical matter. However, materialism and idealism face the "hard problem" and the "inverse hard problem," as we have seen. In contrast, RM's complementary, dual-aspect monism adopts an (inverted) triangular theory of manifestation: viewed from a third-person perspective, the operations of the human mind appear as physical processes, while, viewed from a first-person perspective, mental operations appear as conscious experiences. Viewed either way, these physical and conscious manifestations encode information. Consequently, RM proposes that the underlying nature of the human mind somehow combines these manifest aspects in the form of a psychophysical form of information processing that develops over time. The principle of simplicity (parsimony) suggests that the same complementary principles apply whenever systems are sufficiently internally integrated and externally

isolated to have distinguishable “minds” at different levels of manifestation. If so, the macrocosmic human mind might have a normally unconscious, complex architecture with component structures and relationships between those structures (of the kind suggested by Shani) that can, in principle, be real-ized (directly experienced) at different levels of manifestation—with the caveat that such extraordinary experiences, like ordinary experiences, can be hallucinatory as well as veridical and that, even when veridical, they might be partial, approximate, and species specific.

However, the unmanifest ground of being is, by definition, the ultimate base of all being, not dependent for its existence on any other—and all features of being, both manifest and unmanifest, must be present there *in potentia*. That would include and combine seemingly polar opposites for the reason that these are complementary pairs required to define a dimension, in which each pole can derive its meaning only from its complementary opposite. For example, while Robert (above) calls his first type of experience “pure consciousness,” he actually describes it as “a mass of swirling energy of immense proportions”—as “intelligence, and creative energy transcending all polarities. It was infinite and finite, divine and demonic, terrifying and ecstatic, creative and destructive . . . all of that and much more”—all of which describes a *being* or, perhaps, a *form of being* that he goes on to identify with the Dharmakaya, the causal body within Buddhist philosophy that provides the conditions for all manifestation. Given its “intelligence” and “creative and destructive” potential, this might be better described as the Cosmic Mind.

Note too that “a mass of swirling energy of immense proportions” would support the view that Cosmic Mind is, in this sense, partly *physical* in some subtle, primordial way—as suggested by later Vedic philosophy. In contrast, Grof’s summary of the second type of experience, Void, provides a very “pure” description of *witness consciousness*—in which one becomes “pure consciousness aware of absolute nothingness.”

If one accepts that *all* such qualities of consciousness and features of mind must coexist within the absolute ground of being, how one characterizes that being then becomes partly a matter of personal choice. However, the choice one makes does have theoretical consequences. Shani, for example, chooses the term “cosmic consciousness” to describe transcendent being, which then forms the departure point for his idealist version of cosmopsychism in which physical energies (and entities) are just the *manifest appearances* of a pure, transcendent consciousness. This faces the “inverse hard problem,” as we have seen. In contrast, RM chooses to describe the transcendent ground of being in terms that incorporate *all* of its experienced features, including primordial consciousness, energy, intelligence, and, presumably, the dynamic forms of information processing required to activate and manifest these (in

any form). Within RM, such primal physical features are not mere appearances but also intrinsic, transcendent qualities of Cosmic Mind.

The material world and our ability to experience it can then be seen as a creation within Cosmic Mind from materials within itself. While such features might or might not be quite the same as physical energies and psychological qualities as these are currently understood by science or normal human experience, they, together, must provide the preconditions for those manifest physical energies and psychological qualities. On this understanding, the energetic aspects of the ground of being manifest in increasingly complex layers to support the existence of macrocosmic physical events, entities, and processes, giving them their relative stability regardless of whether we, as conscious agents, experience them. Conversely, “pure consciousness” forms the ultimate ground of our own consciousness whether or not we realize it.

If normal human consciousness is embedded in and supported by the greater universe just as the visible tip of an iceberg is supported by the greater base and the surrounding sea, material manifestation can be viewed as a process by which the iceberg is formed from the primordial sea. And self-realization can be understood as a process whereby the “light” of the normally conscious tip of the iceberg gradually extends into normally unconscious layers of this manifestation until, in the end, in complete realization, it encompasses both the iceberg and the grounding sea.⁴¹ In this way, *puruṣa* and *prakṛti* are reunified in Brahman.

POSTSCRIPT

While the primary purpose of this chapter is to provide a well-grounded, nonmaterialist understanding of both normal and mystical experiences, many other chapters in this volume focus on experienced phenomena that are extraordinary for the reason that, if they are veridical, consciousness, mind, and the material world must relate to each other in ways that are very different from how these are understood in current reductionist science. RM provides a more encompassing alternative. Like other forms of cosmopsychism, RM makes a clear commitment to a form of conscious, postmortem survival—a possibility excluded by exclusively brain-based theories of consciousness. Within RM, all manifest forms of being ultimately revert to the ground of being (from which they were never separated), just as the waves of the ocean revert to the primal sea. The ground of being is conscious and, like energy, can be neither created nor destroyed. Although the ontology of RM does not require it, RM is also open to the possibility of individualized conscious survival of the various kinds posited by Leibnizian monadic theories and

Hindu and Buddhist karmic theories of reincarnation. These would require primal forms of psychophysical differentiation within the ultimate ground of being that are both sufficiently well encapsulated to count as individuals and, internally, sufficiently well informationally integrated to operate as distinct subjects with individualized perspectives. But they might otherwise share the nature of the ground of being, for example, in the sense that Atman can be thought of as an individualized form of Brahman.

RM also adopts the view that *information processing* is the natural way in which energies that we conventionally think of as physical converge with processes that, in other contexts, we think of as mental (although there is no space to develop that theme here). Consequently, the manifest universe is a sea of information that is multilayered and organized, at different orders of scale, not just physically but also *psychophysically*. This sea of information is the normally unconscious, supporting structure of our own being. Driven by the exigencies of biological survival, normal human perceptual and cognitive systems select from, attend to, and shape pertinent information into macroscopic experienced forms appropriate for effective interaction with the surrounding world, thereby constructing a sense of self-location in a surrounding phenomenal world through processes that achieve perceptual projection (see discussion above). This sense of self-location is malleable and can be altered both artificially and in various clinical syndromes, thereby, perhaps, underlying the phenomenology of out-of-body and viewing-at-a-distance experiences. However, RM remains open to the possibility of information access from out-of-body perspectives, although this would have to be access to the surrounding sea of information via a different route to that normally provided by the sense organs.

Given the ultimate unity of the primordial ground, one would expect the more microscopic, primal layers of manifestation to be more deeply interconnected, as suggested by quantum mechanics, quantum electrodynamics, string theory, and quantum gravity (including the holographic organization of spacetime at the Planck scale). Although these deeper interconnections are unconscious, they can have conscious effects. Felt connections between closely related human beings, humans and animals, and unrelated humans (manifest, for example, in a sense of being stared at) would require nonordinary forms of mental connectivity that in this scheme would be provided by normally unconscious, more primal layers of mind that naturally connect what in normal experience appear to be entirely separate macrocosmic minds. Unconscious psychophysical connections (at more primal levels of manifestation) might also provide the conduit by which, in cases of psychokinesis, volition might influence objects and processes beyond the body surface by nonordinary means.

It goes without saying that these brief suggestions fall far short of detailed explanatory models of the kind required by science. Nor do they in any way prejudice the veracity of the wealth of findings in this area and the many ways of interpreting those findings. However, RM adopts the view that it is far too early in the progress of science to close our account with reality. “There are more things in heaven and earth, Horatio, than are dreamt of in your philosophy” (*Hamlet*, Act 1, Scene 5).

NOTES

1. For a fuller evaluation of both the *prima facie* plausibility of dualism and its many associated problems, see Velmans (2000, Chapter 2; 2009a, Chapter 2).

2. For a review of these historical precedents, see the introduction to Velmans (2018a).

3. For a detailed analysis of how to define consciousness in a way that is relevant to contemporary research and in a way that does not prejudice its ontological status, see Velmans (2009b).

4. For a detailed evaluation of these positions, see Velmans (2000, Chapters 3–5; 2009a, Chapters 3–5).

5. Velmans (1991a) examined how phenomenal consciousness relates to all major phases of human information processing, from input to output (including input analysis, pattern recognition, attention, learning, memory, thinking, volition, control of complex behavior, and so on). As its conclusions directly challenged prevailing reductive functionalist assumptions, it attracted wide resistance and was accompanied by thirty-six critical, open peer commentaries and my reply (Velmans, 1991b) followed in subsequent years by four additional continuing commentaries and a further two replies (Velmans, 1993a, 1996). This brief summary merely presents a few of the conclusions (and consequently why I reject functionalist reductionism). For interested readers, these papers are available online on both ResearchGate and Academia.edu—and an updated review of the relevant literature along with a deeper analysis of its implications also appears in Velmans (2009a, Chapter 10).

6. For a detailed discussion of this basic point, see Velmans (2012a).

7. Although this more nuanced treatment of first- and third-person views of the mind was widely opposed at the time of its introduction, in various forms it later became quite standard in consciousness studies—for example, in *neurophenomenology* (Petitmengin, 2006; Varela & Shear, 1999), in *experiential neuroscience* (Price & Barrell, 2012), and in the widening acceptance within neuroscience that third-person investigations of the brain can in principle reveal the neural correlates of consciousness but not the nature of phenomenal consciousness itself. The target article and my reply to commentaries in Velmans (1991b) also introduced a dual-aspect theory of information processing—a form of ontological monism combined with epistemological dualism reminiscent of the work of Fechner (1860), to which we return below. This and many other nonreductive features of my *Behavioral and Brain Sciences* analysis

were also later adopted (and popularized) by the philosopher David Chalmers (1995) in ways outlined in Velmans (1995)—an invited commentary on his target article in the *Journal of Consciousness Studies*.

8. This form of ontological monism combined with epistemological dualism also allows one to understand why, in many contexts, it makes perfect sense to speak of consciousness–brain causal interactions while at the same time accepting that, viewed from a purely third-person perspective, the physical world appears causally closed. There is extensive evidence both that physical states of the brain can affect conscious states and that conscious states can affect physical states of the brain—for example, in placebos, psychoneuroimmunology, hypnosis, and many other forms of psychogenesis. Consequently, in clinical practice one can in principle intervene in either a third-person way (e.g., with drugs) or a first-person way (e.g., with talking therapies)—depending on which mode of intervention is appropriate. Within dual-aspect monism, such consciousness–brain causal interactions can be seen to involve “perspectival switching” from first- to third-person observable manifestations (or vice versa) of the same underlying (psychophysical) mental processes developing over time. Unfortunately, there is again no space to deal with this important issue in this chapter, although we return to the psychophysical nature of mind later. For more detailed analyses, see Velmans (2000, Chapter 11; 2009a, Chapter 13) and, in particular, Velmans (2002a), a target article for a special issue of the *Journal of Consciousness Studies*, accompanied by eight commentaries and my reply (Velmans, 2002b), followed by five further commentaries and a further reply (Velmans, 2003).

9. See detailed discussion in Velmans (2000, Chapter 6; 2009a, Chapter 6).

10. Following the more formal analysis I have developed elsewhere (Velmans, 2000, 2009a, 2017b), we may say that E and S have “symmetrical access” to the light in this situation.

11. To those immersed in dualist or reductionist modes of thought, this proposed expansion of the contents of consciousness to include those aspects of the phenomenal world that we normally think of as the “physical world” may seem radical, and the notion that many experiences have at least a phenomenal location and extension might appear strange. But, thus far, this proposal is hardly new. In one or another form, it appears in the work of George Berkeley, Immanuel Kant, G. H. Lewes, W. K. Clifford, Ernst Mach, Morton Prince, William James, Edmund Husserl, A. N. Whitehead, Charles Sherrington, Bertrand Russell, and Wolfgang Köhler. Over the past fifty years or so, how to incorporate such spatially extended consciousness into mainstream science has also been given serious consideration by Gray (2004), Lehar (2003), Pribram (1971, 1979, 2004), Revonsuo (2006), and Tye (1995) and, more recently, by Pereira (2018), Rudrauf et al. (2017), and Trehub (2007).

12. The view that experienced phenomena generally provide useful, albeit incomplete, approximate representations of their autonomously existing causes (things themselves) is a widely adopted view in science known as “indirect realism” or “critical realism.”

13. A detailed account of how the reflexive model of perception leads to reflexive monism is given in Chapters 6 to 14 of Velmans (2009a). Additional analyses appear in many papers. For example, Velmans (1990) deals with how RM combines

representationalism and critical realism with idealism; Velmans (2008) gives a detailed analysis of how phenomenal space relates to virtual space and measured space (the space described by physics); Velmans (1993b, 2017b) deals with the relationships of subjectivity, intersubjectivity, and objectivity and their implications for an epistemology for the study of consciousness and, more generally, for empiricism within science; and Velmans (2012b) begins to develop an integrated framework that relates phenomenal consciousness to the ground of being that we develop further here.

14. More detailed analyses of different features of the terrain have also appeared in many online papers—see <http://www.gold.ac.uk/psychology/staff/velpub>. However, the entire philosophical position (the “overall geography” of the complex terrain) cannot be described or fully comprehended and assessed in less than a book (see Velmans, 2000, 2009a).

15. I use the compound term “mind/brain” to denote the dual-aspect (psychological/physical) nature of the human mind.

16. Although it remains possible that, in some respects, the mind/brain system does in actuality exhibit holographic principles, as in Pribram’s (1971, 1979) holographic model of neural organization and space perception and in his later paper (Pribram, 2004) that explicitly links the broader consequences of his model to the reflexive monism developed in Velmans (2000).

17. Trehub’s *Retinoid* model focuses largely on how a sense of self-location within a surrounding phenomenal world might be understood in terms of the functioning of the visual system and associated cognitive processing. Pereira’s *Projective Theory of Consciousness* develops an explanatory framework for integrating first-person viewable conscious experience with the third-person viewable neural correlates within a bipolar structure that contains both a “Sense of Self” created by interoceptive projective processes and a “Sense of the World” created by exteroceptive projective processes. Rudrauf et al.’s *Projective Consciousness Model* also suggests how a sense of self-location within a surrounding world is constructed drawing largely on how projective geometries can serve to optimize the requirements of organisms that need to navigate a three-dimensional world, and how these might actually be implemented in human information processing. Note, however, that in the present analysis, I distinguish a sense of *self-location* from a *sense of self* as such. As suggested by Buddhist introspective *vipassanā* practice, the sense of self, construed as a vantage point, is itself “empty” (of phenomena). And, insofar as one identifies this (rightly or wrongly) with consciousness, consciousness acts as a *witness*—an issue to which we return below.

18. For a detailed discussion, see Velmans (2000, Chapter 7; 2009a, Chapter 8).

19. While materialist philosophies currently dominate Western thought and idealist philosophies have traditionally been dominant on the Indian subcontinent, it is not, of course, the case that Western philosophy is uniformly materialist and Eastern philosophy idealist. On the contrary, the full range of materialist, idealist, and intermediate views can be found in both Western and Eastern traditions. See, for example, the encyclopedic reviews by Radhakrishnan (1931), Rao (2011), and the brief summary by Rao (2012) of some of the Eastern positions.

20. Within current consciousness studies, the default assumption is that the physical causes and correlates of any given experience will be neural. However, this analysis remains open to the possibility that physical causes and correlates of consciousness might also be electromagnetic or even microphysical, at least in part—a possibility that may be particularly relevant in understanding the mechanisms underpinning various “rogue” experiences of the kind explored in this book. See the postscript at the end of this chapter.

21. I assume here that it is simply a “natural” empirical fact about the world that certain physical events in the brain (the correlates of consciousness) are accompanied by experiences. Consequently, when such neural activities (the correlates) occur in one’s brain, one has the corresponding experiences. I also assume that the formatting of neurally encoded information relates to the formatting of corresponding, phenomenally encoded information in an orderly way, with discoverable neural state space/phenomenal space mappings. In short, this relationship follows some natural law, however mysterious it presently seems. I return to this issue and to analogous situations in other branches of science below.

22. In third-person observations of the brain, this usually involves the development of new technologies (fMRI, electroencephalography, PET, and so on). However, such refinements can also be obtained with first-person methods—for example, with more highly trained attention to the minutiae of experience (see, e.g., readings in Hurlburt & Akhter, 2006; Petitmengin, 2006; Price & Barrell, 2012; Shear, 2007; Varela & Shear, 1999).

23. For a more detailed discussion, see Velmans (2008, 2012a) and Atmanspacher (2012).

24. For a detailed analysis, see Velmans (2000, Chapter 12; 2009a, Chapter 13) and, in particular, Velmans (2012b), which also gives a critique of standard Darwinian accounts of the evolution of consciousness in terms of random gene mutation and survival fitness, available at <https://www.researchgate.net/publication/245032935>. On the last point, see also the critiques in Velmans (2011, 2014).

25. The following analysis of what consciousness actually does is a short extract from arguments developed in detail in Velmans (2000, Chapters 11 and 12; 2009a, Chapters 13 and 14).

26. This is, of course, a variation of the familiar “philosophical zombie” scenario that has been much discussed in consciousness studies.

27. Blindsight is a well-known neurological syndrome in which individuals retain an ability to discriminate and identify stimuli presented in their damaged visual fields despite not being able to consciously see them (see Weiskrantz, 1991).

28. I have hyphenated the term “real-ize” to emphasize that it is only when one consciously experiences some entity, event, or process that it becomes *subjectively real*.

29. In this way, RM combines ontological monism and epistemological pluralism (there is one thing that can be known in many ways) with the added suggestion that knowledge is, ultimately, reflexive.

30. On this point, Aristotle was not a functionalist reductionist. Rather (following Anaximander and Plato), he suggests that “in regard to reason and the speculative faculty, we have as yet no certain evidence, but it seems to be a generically distinct

type of soul and it alone is capable of existing in a state of separation from the body, as the eternal is separable from the mortal” (Aristotle, 1912, p. 49).

31. Specifically, “Prakṛti is the primary substance from which all forms of matter evolve. Whereas the objects are limited in space and time, the Prakṛti itself is ubiquitous and all-pervading. It is the ground condition of all physical manifestation in the universe” (Rao, 2011, p. 265). Rao goes on to explain how three fundamental constituents of Prakṛti, *sattva* (the essence of information content), *rajas* (energy), and *tamas* (mass/inertia), differentiate from the primordial condition in which they are in perfect equilibrium and then combine in different ways to produce the multiplicity of physical forms.

32. The formal term used in philosophy of mind is that consciousness is “intentional.”

33. Swami Abhedananda, a direct disciple of the nineteenth-century mystic Ramakrishna Paramahansa, founded the Vedanta Society of New York in 1897 and subsequently the Ramakrishna Vedanta Math in Calcutta and Darjeeling.

34. See, for example, Albahari (2019), Jaskolla and Buck (2012), Kastrup (2018; Chapter 7 in this volume), Mathews (2011), Nagasawa and Wager (2017), Shani (2015), and Shani and Keppler (2018).

35. It should be noted, however, that in James’s 1909 work *A Pluralistic Universe*, he moves beyond brain-based dependence to a form of cosmopsychism to account for mystical experience (see discussion by Kelly, 2015, pp. 522–526).

36. Again, I only have space here to give a brief indication of how the dual-aspect monism adopted by RM entirely avoids the “combination problem” rather than review or critique other approaches. However, it is worth mentioning that Chalmers’s (2017) review of the area expands the combination problem into three subproblems: (1) the subject combination problem: how could micro-subjectivities (of microphysical subjects) combine to yield the unique macro-subjectivity of conscious organisms like ourselves; (2) the quality combination problem: how could micro-qualia combine to form macro-qualia (already discussed); and (3) the structure combination problem: how could micro-experiential structure combine to yield macro-experiential structure, such as the complex spatial structure of visual and auditory fields? RM avoids all three problems in the same way. The subjectivities and complex conscious experiences of macro-organisms are not simple compounds of micro-subjectivities and phenomenological microstructures. Rather, they are unique subjective perspectives and structured experiences formed by the integrative physical processes that support them. For example, the manner in which analysis of visual micro-features are formed into an integrated, visually experienced spatial structure is known as the “binding problem” in neuroscience, with various proposed empirical solutions (Singer, 2013). Viewed this way, the “composition” problem becomes empirical rather than metaphysical.

37. According to Skrbina (2020), David Ray Griffin introduced the term “panexperientialism” in the 1970s to distinguish Whitehead’s process philosophy from other forms of panpsychism. However, the term “panexperientialism” is not commonly used, as few panpsychists address the distinction between consciousness and mind.

38. 1 Corinthians 13:12 (King James Version).

39. For studies that investigate the particular effects of psilocybin on mystical-type experiences, see, for example, Doblin (1991), Griffiths, Richards, McCann, and Jesse (2006), and Pahnke (1966); an in-depth analysis of the phenomenology of such induced experiences by Grof (1998); reviews of the history and recent resurgence of psychedelic research by Pollan (2018); the effects of different classes of drug on conscious states and their underlying processes by Presti (2017); and the detailed study of the neurophysiological accompaniments of such drug-induced, mystical-type experiences using fMRI and other neuroimaging techniques (Carhart-Harris et al., 2016).

40. For a discussion of linear causation within Advaita Vedanta, see Rao (2011).

41. These developmental trajectories are respectively referred to as “involution” and “evolution” by Sri Aurobindo (1970).

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A NEO-HEGELIAN THEORY OF MYSTICAL EXPERIENCE AND OTHER EXTRAORDINARY PHENOMENA

Glenn Alexander Magee

This chapter attempts to do several things, each of which is far too ambitious for a chapter and better suited to a book-length work. First, I will offer a summary of the essential ideas of Hegel's metaphysics. Second, I will argue that Hegel's metaphysics can provide us with an illuminating and intellectually satisfying account of the nature of mystical experience. Third, I will attempt to show that this account of mystical experience also sheds light on paranormal phenomena.¹ I will not attempt to *explain* exactly how paranormal phenomena take place, for that is not the job of a philosopher. Rather, I will show that given the metaphysics argued for here, we should actually find paranormal phenomena to be unsurprising and nonmysterious.

It is important to note that you will find little of what I have to say here in Hegel's own writings. In fact, I am offering a neo-Hegelian philosophy that differs from Hegel's ideas in important ways. However, the difference consists mainly in the fact that I have extended or expanded Hegel's philosophy to treat certain issues about which he was silent. I believe, in other words, that what I claim here is still very much in the spirit of his philosophy. There are a few cases, however, where I believe Hegel did get things wrong, and I discuss some of those instances herein.

One major thing Hegel got wrong is that he rejected the idea of evolution. Hegel died twenty-eight years before Darwin's *On the Origin of Species* was published, but the idea that species had evolved was not original with Darwin (Darwin's chief contribution was the theory of evolution by natural selection). There is some irony to Hegel's position, as he stands with Heraclitus and Whitehead as one of the major philosophers of process. Hegel held that reality itself must be understood as a dialectical process in which what he called "Idea" unfolds in progressively more adequate, concrete forms. He

saw this process, however, as a temporal one only where human history is concerned. Although nature exhibits a dialectical scale or “great chain of being,” Hegel (like Aristotle) insisted that this scale revealed itself all at once, in the variety of natural forms around us. He did not believe that those forms came into being sequentially, in time.

However, because Hegel is the philosopher of process par excellence, it actually does little violence to his system to import the idea of evolution into it. In fact, doing so demonstrates that Hegel’s metaphysics can provide a framework for understanding evolution—though one that takes us considerably beyond Darwin and commits what is to some scientists an unpardonable sin given that it introduces the idea of *telos*, or purpose. In the twentieth century, the professional philosopher who did more than anyone else to argue for Hegel’s relevance to recent science was Errol E. Harris (1908–2009). Harris’s magnum opus was *Foundations of Metaphysics in Science* (1965), in which he argued—with both impressive command of the scientific literature and impressive logic—that it is Hegel’s metaphysics, and only Hegel’s metaphysics, that can make sense out of the data put forward by contemporary physics, biology, and cognitive psychology. Harris continued the same project in several other works, including *Formal, Transcendental, and Dialectical Thinking* (1987), *Cosmos and Anthropos* (1991), and *Cosmos and Theos* (1992).

Harris’s application of Hegelianism to contemporary science is not merely interpretive but also transformative. He argues that in order to make sense out of their findings, scientists must reject the outdated mechanistic, materialistic, and anti-teleological presuppositions still operative in their thinking. It is Harris’s work that has been the greatest single influence on the neo-Hegelian perspective I will put forward here. Essentially, my project is to do for mysticism and the paranormal what Harris did for the more “mainstream” findings of the sciences: to argue that Hegelian philosophy can illuminate these phenomena as well. However, just as Harris goes beyond Hegel, I go beyond Harris: to my knowledge, he did not address the sorts of issues I deal with here (though I strongly suspect he would have been sympathetic).

HEGEL AND HOLISM

In order to begin my brief account of Hegelian metaphysics,² I must actually violate one of Hegel’s major methodological principles: I must begin from somewhere. Hegel defines philosophy as a presuppositionless science; that is, it is the only science that questions literally everything, and so it cannot begin with any determinate presuppositions. In his *Logic*,³ Hegel solves the problem of how to begin philosophy by beginning with nothing. In con-

sidering nothing, an entire framework of ideas is generated dialectically, culminating in what Hegel calls Absolute Idea. This framework constitutes a metaphysics that is then used to interpret nature (in Hegel's *Philosophy of Nature*), and human nature (in the *Philosophy of Spirit*). (I will return to the structure of Hegel's system later.)⁴

However, in a chapter such as this, I cannot begin with nothing and generate the entire Logic. I must start from a determinate principle or idea, and further—in order for my argument to be convincing—it must be one to which my readers will readily assent. I will begin, therefore, with the idea of *holism*. This is a metaphysical position that I could almost say gives us the essence of Hegel's thought (Harris would certainly agree with this claim), and it is a position with which many of my readers will be both conversant and sympathetic. Among other things, holism is the key idea of the "deep ecology movement," and the exponents of this movement have often expressed the principle of holism in remarkably Hegelian language.

By holism, I mean the idea that the universe is a whole rather than a heap. It is not simply a collection of disparate, sometimes unrelated particulars. Rather, the universe is a *one* in which everything is related to everything else, and each thing is what it is by virtue of its place within the whole. In developing this concept, Hegel and Hegelians often employ a distinction between "external relations" and "internal relations." These are, in effect, two perspectives on the relations between objects. When objects are externally related, changing or removing one object seems to make no difference to any of the others. This is the way of looking at things that is often called "common sense" (which frequently fails to see the deeper connections between things), and it is the key assumption involved in mechanistic materialism. Hegel points out that one can also see it in other areas, such as in the "atomic individualism" operative in Western classical liberal political theory.

By contrast, to say that objects are related "internally" is to affirm that in actuality things are what they are in relation to others (in relation to everything, in fact) and that altering one thing will have an effect on others, often in nonobvious ways. In certain contexts, relations will at least appear to be entirely external. For example, on the desk in front of me are a coffee cup and a pencil; it is not at all obvious how these are related and how altering or removing one might affect the other. But in the largest context of all, the universe itself or the whole, *all* relations are seen to be internal: everything is what it is in relation to everything else, and the whole is the system of which all these elements are the "parts."

It is useful to consider what this conception of wholeness or holism *is not*. It is not an abstraction, as common sense will insist. Common sense will claim that individuals, the many, are "concrete" and that the one or whole is

an abstraction, or an abstract concept. Hegelianism asserts that exactly the reverse is the case. The whole, and only the whole, is truly concrete, whereas the “parts” of the whole, the individuals that make it up, are abstractions from the whole. This is why Hegel famously said that “the true is the whole”: it is the whole that is the one, true individual; everything else is a part, aspect, or “moment” of the whole.

To take a simple example, the rabbit can only be—and be *thought*—as situated in an ecosystem. In other words, the rabbit can only live in such a system and can only be *understood* in relation to such a system. Our natural, commonsensical tendency is to take the rabbit as a concrete and the ecosystem as an abstraction. But Hegel would argue that the real whole, the real individual or concrete, is the ecosystem, from which the rabbit is, in a sense, “abstracted”—that is, artificially separated, in thought, from the context that makes it meaningful (though Hegel himself did not, of course, use the term “ecosystem”).

Another crucial aspect of Hegel’s holism is the claim that *the whole is immanent in the parts*. This is equivalent to the perennial idea that the microcosm mirrors the macrocosm (and Hegel actually does use this language on occasion). In Hegel’s philosophy, each element within the whole reflects the structure of the whole itself, to varying degrees of adequacy. In other words, every element within the whole is itself a whole, at one level or another reflecting the holism that is fully expressed only by the universe itself. Of the parts that go to make up the whole, only humankind is the *true* microcosm, the true mirror held up to the universe (a key point to which I will return later).

In Hegel’s understanding of nature, wholeness or organization is present at every level. The idea that wholeness or order emerges out of disorder or disunity is completely foreign to his way of thinking. But, as noted already, individuals or systems of individuals within the universe exhibit order to varying degrees. There is thus a scale of nature in terms of the degree to which natural forms exhibit wholeness. In order to grasp this important point, however, we must try to characterize wholeness more adequately. Obviously, wholeness involves the integration of component elements. Consider the enormous difference between a simple chemical compound (a simple whole) and a crystal, between a crystal and a single-celled organism, or between such an organism and one consisting of many cells, all united as one living thing. Or consider the huge difference between the items on my desk (which do indeed form a whole, the principle involved being their relation to me) and a machine. In each case, the differences have to do with the complexity of integration of component parts.

Another aspect of wholeness, however, is sustainability or viability—which is tied to the idea of self-sufficiency. The simplest of organisms is more of a whole than a crystal because it is capable of taking action to main-

tain its structural integrity (evading predators, regenerating itself through nutrition, and so on). In a much more complex organism, such as one of the higher vertebrates, greater complexity is matched by greater versatility—by the animal's more advanced ability to maintain itself as a whole.

It is here that we realize there is an intimate connection between wholeness and *individuality*. Every individual is itself a whole, distinct from other wholes. Maintenance of wholeness is the same thing as subsisting as an individual, existing thing. And we find this phenomenon, again, on a scale or continuum. As we go up the scale in terms of ability to “maintain wholeness,” individuality understood as *uniqueness* also increases. The highest entities on the scale are those most versatile in their ability to self-maintain. To take an example at the low end of the scale, samples of copper are individuals, but as individuals they lack a capacity to respond to environmental stress, to “self-correct” in order to self-maintain. And they are all pretty much alike. By contrast, plants have much more versatility in their responses, and some plants of the same species are more robust than others in executing those responses. But it is the same limited script for every plant. It is in animals that we see greater versatility entering in, and hence greater individuality, though here, too, there is a scale. The dog is more versatile than the rabbit and also exhibits greater variation of personality. Or, we might say, the dog is more versatile than the rabbit; *thus*, it exhibits greater variation of personality.

It is human beings who exhibit the greatest versatility in self-maintenance—and the greatest individual variation. However, as implied already, for Hegel the only *true* individual is the whole, the universe itself. This is why he refers to the whole (though not very often) as “the Absolute,” “the unconditioned,” and “the infinite.” The whole is Absolute precisely because there is no larger context to which it is relative—it is the largest context of all (it is *the* context). It is unconditioned because there is nothing outside it that conditions or affects it. And it is infinite not because it goes on and on and on, but rather because there is nothing else that could possibly limit it.

GOING BEYOND HEGEL: EVOLUTION

The ideas presented thus far, with some differences in terminology, are all to be found in Hegel's *Philosophy of Nature* (with Hegel owing great debts to Aristotle). However, as noted earlier, Hegel rejected evolution. We are so familiar with the idea of evolution, so used to thinking in terms of it, that it is difficult *not* to think of the “scale of nature” discussed above as one that unfolds itself in time. But Hegel saw the higher simply as existing alongside the lower, not as a development out of the lower.

If we introduce evolution into what I have said thus far, then we must understand Hegel's "whole," the universe, not as a static or eternal One but as a dynamic and ever-changing unity. The change involved is of multiple varieties, but in terms of natural history the principal change exhibited over the course of billions of years is the progressive coming into being of "higher" natural forms that are higher in virtue of exhibiting greater wholeness—or individuality, just as I discussed earlier. As I have also discussed, however, these forms are all parts of a whole, the universe itself, and considered apart from the whole they are mere abstractions. We may thus speak of evolution in two ways, or of two tracks of evolution:

1. things *in* the universe evolving toward greater exemplification of wholeness, integration, and order
2. the *universe itself* evolving toward greater wholeness, integration, and order

It will be unsurprising if I suggest that ultimately these come to the same thing. However, there is an apparent problem here: It seems that there is never any point at which the universe itself, as a whole, is *disunified*. At every moment in time, the individuals within the universe are all still united in the whole that is the universe itself. It would appear, then, not to matter that some of those individuals exhibit a comparatively primitive or fragile state of unity. While they exhibit this on an individual level, each is nevertheless a part of the whole. The whole is never anything less than fully one. So, is there any sense in which the universe *itself* evolves? Our intuition here is that there must be, that the coming into being of greater wholeness *within* the universe in some way contributes to the wholeness of the universe itself.

The Hegelian—or neo-Hegelian—answer is this: the evolution of the universe itself is to be found in the coming into being of *consciousness*, which is key to the further development of individuation and wholeness both of the universe as a totality, as a One, and of individuals within the universe. Consciousness is present only in living things. However, the Hegelian position (which is often unclear in Hegel's own writings) is that there is no sharp discontinuity between life and nonlife and between the conscious and the unconscious. Rather, the development of life is a further stage in the development of wholeness. Living things are systems that are self-maintaining. There are forms within the realm of the nonliving that have a systematic, holistic character but nothing on the order exhibited by life.

As already briefly mentioned, the wholeness and systematicity of life are rooted in the ability of living organisms to respond to the environment with self-maintaining change. For example, some stimuli provoke a response of fight or flight. And the whole process of nutrition is one of opening the

system to the world, taking it in, and transforming it into the organism itself. This is an extraordinarily delicate and, in fact, remarkable achievement. In its every act, the organism seeks to maintain itself as a whole, as an individual. So, life is simply a higher form of organization, of wholeness.

Rather than think of consciousness as something that miraculously emerges at a certain point in the history of life, before which life was unconscious, the Hegelian position considers consciousness a further form of organization within the life of the organism. Again, the organism is characterized by self-maintenance as a whole, by, in effect, “holding itself together” as a one or unity. Consciousness is both a means to self-maintenance, to maintaining the wholeness of the organism, and a way in which the organism further unifies itself: it unifies the stimuli or input it receives into an awareness that is simultaneously an awareness of the world and of itself. The organism exists at a nexus of influences and relations and is continually being affected or stimulated by these. Even at the lowest level of life, these stimuli must be *organized* by the life-form in order for them to provoke a response.

For example, imagine a very simple, shrimplike organism able to detect vibrations of approaching predators, which spur it to take evasive action. This involves, however, two relatively sophisticated achievements. First, suppose the vibrations are felt in the tail but not in the entire body. The organism must have an awareness of its bodily state as a unified whole—it must be aware, in effect, that this is *my tail*—for this information to be processed as having implications for the bodily integrity (i.e., the survival) of the organism itself. Second, the organism must be able to unify stimuli into an experience that is a single whole. If its body is able to detect the approaching predator through more than one sense modality, it must unify this input into a single whole that is the experience of the present moment. For example, if it feels the vibrations through some medium (e.g., water) *and* detects a shift in light (the ominous shadow of an approaching, larger creature), it must unify these two very different inputs into the single experience of one object: the predator (or the single experience of one state of affairs: imminent attack).⁵

Both of these cognitive achievements are acts of synthesis or of making whole. And they are inseparable. The achievement of the second would be useless if it were unaccompanied by the first. If I could synthesize stimuli and be aware of objects completely without the sense that this is “my” experience, then cognition would be biologically useless.

In Kant’s account of epistemic conditions, he argues that every experience of an object or state of affairs is a synthesis. I am aware of individual objects through synthesizing input from different sensory modalities (e.g., I see, feel, and hear the keyboard in front of me clacking beneath my fingers as I type this). A further level of synthesis involves relating objects to one another in

a unitary experience of the “current situation.” But Kant also points out that to any experience, we implicitly append “I think.” In other words, in being aware of the keyboard in front of me, I am aware *that* I am aware of this object, that the experience I am having is *mine*. What I argued earlier, in speaking of lower forms of life, is that these two acts of synthesis—the synthesis of stimuli into an awareness of an object and the synthesis of this awareness as *my* state—are present in germinal form even in life-forms to which we are hesitant to attribute consciousness. An implication of this position is that consciousness always involves some degree of *self*-consciousness, though this exists in nature on a continuum.

As I have already mentioned, for Hegel the whole is implicit in every part, and when these parts are seen to unfold over time, the end is implicit in the beginning, or the higher is implicit in the lower. In the simple description of consciousness just given, as consciousness (and self-consciousness) present even in the most rudimentary forms of life, *philosophy itself—what Hegel calls Absolute Knowing—is prefigured*.

For Hegel, philosophy is simultaneously knowledge of the whole and self-knowledge. This point is easily grasped. If everything is related to everything else, then true or complete self-knowledge would have to involve seeing how I am related to everything else. Thus, the quest for self-knowledge can be satisfied only by knowledge of the whole. There is no disengaging knowledge of the whole from knowledge of the whole *in relation to me*, for I only know from *my* perspective. But here we face a difficulty: the aim of philosophy is somehow to achieve a standpoint where “my perspective” becomes absolute or essentially aperspectival. This is a point to which I will return shortly. First, I need to characterize more fully how knowledge of the whole is reached.

The achievement of knowledge of the whole itself is a process of integrating knowledge into ever greater or more inclusive wholes or contexts. We all know people who are seemingly aware only of their immediate situation. We advance beyond that narrow perspective when we understand how our situation is situated in a larger context. And from there, we can then move to a still greater context. Philosophy is knowledge of the largest context of all (knowledge of the Absolute, the whole)—one in which everything becomes meaningful. Since my immediate context is *in fact* situated in a larger context, whether I am aware of it or not, this means that I am related to factors or entities that condition my immediate context (again, regardless of whether I am aware of this). We can therefore say that in being aware of my immediate context, I am *implicitly* (or potentially) aware of the larger context. I have simply not yet performed the cognitive acts of synthesis—of unifying my experience within a larger whole—necessary to bring this to *explicit* awareness.

Further, since the larger context of my life is implicated in a still larger context and the ultimate context is the whole itself, we can easily see that in awareness of my immediate context *I am aware implicitly of the whole* and of my place within the whole. In knowing one thing, therefore, I implicitly know all. In the simplest act of awareness, I am implicitly aware of the whole. Thus, in Hegel's *Phenomenology of Spirit*, the most basic form of human consciousness (the simple, direct awareness of an object, what Hegel called Sense Certainty) "prefigures" the final and highest form of Spirit, Absolute Knowing.

And in the simplest conscious being, the philosopher (or the wise man) is also prefigured. Going back to our shrimplike creature, it performs two cognitive acts that are intimately intertwined: (1) awareness of its environment and (2) awareness that this is *its* awareness; it relates its environment to itself. This is philosophy on, as it were, a microscopic scale: it is self-knowledge that is knowledge of the whole in germinal form.

In Hegelian philosophy, ordinary commonsense space-time distinctions are left behind. The universe is seen as a one, as an interconnected whole. The immediate context, in which my body is perceived or felt as separate from its surroundings, is overcome. I see myself as part of a whole, as continuous with the rest of existence. In fact, I transcend "my body" entirely and realize, in a sense, that "I" am the whole itself. This, in fact, constitutes the achievement of the *aperspectival perspective* mentioned earlier. But for the philosopher, this achievement takes place entirely in theory, in the realm of conceptual theorizing.

Such philosophical theorizing involves a kind of "split" in our being. On the one hand, our everyday experience remains unchanged by philosophy. I write or think about the theory that the universe is a whole and that in the widest context everything, including myself and my body, is a moment or aspect of this whole. And I realize that in thinking this theory through, I am the whole knowing itself: I am a finite member of the infinite, capable (intellectually) of realizing the nature of the infinite as a dynamic, interconnected one and thus embodying the (intellectual) self-realization of the infinite. But when I look up from my book or my keyboard, my experience of the world around me and of my body is largely unchanged. I still experience this body as a discrete individual, as discontinuous with the rest of the world.

Does Hegel's philosophy have a place for a different, nontheoretical realization of the truth it conveys? In other words, is it possible to have a qualitatively different sort of experience of the world in which I do not *think* myself as continuous with the rest of the whole, or think or theorize my oneness with the whole, but rather *experience* this in some direct fashion? Can I *experience* that I am the whole and the whole knowing itself? Obviously, such an experience is

not the same thing as the realization of truth at the end of a chain of argument, as when we finish Hegel's Logic. It is a different sort of experience entirely. What I am talking about would commonly be called a mystical experience, but we will find that much more than this is also at stake.⁶ Is Hegel's philosophy open to this very different sort of "knowledge of the whole"?

A NEO-HEGELIAN THEORY OF MYSTICAL EXPERIENCE

In terms of Hegel's own writings, the answer is yes and no. Despite the influence of mysticism on Hegel (which I have written about elsewhere)⁷ and his openness to mystical ideas, Hegel is dismissive of any sort of "revelatory" experience—something that comes out whenever he speaks about the Romantics (of whom he was sharply critical). To be clear, he approves of the *conclusions* of the mystics and sees that their peculiar sort of logic of contradiction prefigures the dialectic of speculative philosophy. But he is not open to the idea of mystical *experience* as a source of truth.

When I talk to people about my research on Hegel, I have often found that they are quite confident that despite what Hegel says (or does not say), he must have had something like mystical experiences of his own. They are quite confident that Hegel's philosophy was inspired by glimpses of some immediate truth that spurred him to write (much like Jacob Boehme, in fact, the mystic Hegel has the most to say about). On a certain level, I feel that they are probably correct, but of course this is impossible to prove since Hegel did not report such experiences. Nevertheless, Hegel *does* in fact believe that such experiences are possible—it is just that he does not think, as I have already said, that this is a source of knowledge, and he certainly does not think that it provides any support for philosophy.

Our main source for his views on this matter (which will sorely disappoint most of my readers) is the Philosophy of Spirit,⁸ where Hegel discusses not mystical experience per se, but rather what we would call today paranormal or psychic phenomena. This discussion is to be found in Hegel's treatment of the lowest level of Spirit, which he calls "the soul" (*die Seele*), obviously using this term in his own peculiar way. It should be noted here that there is a great deal of confusion about what Hegel means by "Spirit" (*Geist*). In the simplest possible terms, Spirit means something close to what we mean by "human nature." In the past, scholars often translated Hegel's *Geist* as "mind," but mind (in the sense of intellect) is only part of what the term means. Spirit refers to the unique form of consciousness possessed by human beings. Spirit has no existence apart from human beings and must on no account be understood along the lines of a transcendent deity. "Soul" (again,

the lowest level of Spirit) is that aspect of us that is still sunk in nature and is not a function of self-conscious mind or intellect. It is what we might call the “natural self.” The soul, Hegel says, is the “sleep of Spirit,” containing deeper layers that usually go unexplored by our conscious minds.

In his treatment of what he calls “feeling soul” (*fühlende Seele*), Hegel discusses such phenomena as precognition, telepathy, and clairvoyance, especially when these phenomena are produced under the influence of a mesmeric trance. Lacking our terms “psychic” or “paranormal,” he uses the expressions “magnetic phenomena” (after “animal magnetism”) and also “magic.” Hegel accepts that these phenomena are real and offers a number of examples of what he takes to be credible reports. As to his explanation of “magnetic phenomena,” Hegel argues that in these states the individual regresses into a sub-conscious state of identity with the “feeling” part of the soul. The deepest part of the soul is awakened, and it temporarily “displaces,” as it were, the higher levels of Spirit (as, for example, in a hypnotic trance). In this identity with the subconscious soul, ordinary distinctions of time and space, as well distinctions between individuals, are transcended. This is because such distinctions are ultimately *false*; they are the product of what Hegel calls *Verstand*, the “mere understanding” (quite close to what we mean by “common sense”).⁹ When the human subject is temporarily liberated from these distinctions, such phenomena as clairvoyance and telepathy become possible. (Why is it that these distinctions usually bind us so effectively? I will address that question in the final section.)

Hegel is quite explicit in his claim that in paranormal states, space and time are overcome. He writes that “when the free, intellectual consciousness sinks to the form of the merely feeling soul, the subject is no longer tied to space. . . . Secondly, the clairvoyant soul also rises above the condition of time no less than that of space” (Hegel, 1817/1971, pp. 111–112; 1817/1986a, pp. 145–146). Therefore, psychic states overcome the distinctness of sensibly given particulars. To put the matter as simply and starkly as possible, Hegel believes that in certain states we are able to have an unmediated cognition of objects and persons because in truth there *is no absolute division* between objects and persons. Examples of psychokinesis are not mentioned by Hegel, but they perfectly fit the same analysis. The subject is able to directly affect objects at a distance, without mediation (i.e., without a medium), because in fact there is no absolute separation or division between the subject and objects.¹⁰ In these phenomena, Hegel claims, we are *unconsciously* identified with the whole and thus are able psychically to “move” within the whole, to effect change or know what is going on in distant places.

To make these claims plausible, consider an analogy: I am not my foot. And my foot is distant from what I generally believe to be the center of

my consciousness, my head. But I know what is going on in my foot. I do this through tapping into lines of connection of which I am not *consciously* aware: nerves. What I call "I" (my conscious sense of selfhood, the "ego") does not need to "do" anything at all to accomplish this task: I simply must be receptive. Immediate, psychic knowledge of distant places would involve something similar. I must expand my felt sense of identity to include that which I do not normally include in my conscious awareness. And I also do this through lines of connection of which I am not consciously aware. This is possible because, again, everything is interconnected. All is actually one, and I exist at the center of a vast system of connections that relates me to literally everything else that exists.

For Hegel, however, the paranormal is a kind of freak show. It is not under the control of the conscious mind, and it belongs to a level of the self that is extremely primitive and prerational. Hegel is very careful to point out that he regards psychic states as not a "higher" form of consciousness, but rather *pathological*, "a degradation of mind below the level even of ordinary consciousness" (Hegel, 1817/1971, p. 7; 1817/1986a, p. 16). Further, his discussion of insanity in the *Philosophy of Spirit* follows his discussion of paranormal phenomena, and he offers more or less the same theory to explain insanity. Hegel explicitly states that "the magnetic state is an *illness* [*Krankheit*]" (Hegel, 1817/1971, p. 115; 1817/1986a, p. 151).

Nevertheless, Hegel draws an interesting parallel between paranormal states and philosophy itself: "in the visible liberation of Spirit in those magnetic phenomena from the limitations of space and time and from all finite associations, there is something akin to philosophy" (Hegel, 1817/1971, p. 7; 1817/1986a, p. 16). Like paranormal phenomena, philosophy also overcomes the limitations of time and space. Hegelian philosophy overcomes the rigid categories of common sense, which insist on the absolute distinctness of objects and persons. Tantalizing though this comparison may be, Hegel is clear that philosophy is the truest and finest expression of human nature, for it is the *conscious possession* of knowledge of the whole. For Hegel, paranormal phenomena simply exhibit a preconscious sense of identity with the whole. They are interesting but aberrant, uncontrollable, and not-quite-human.

It is important to note that Hegel believes that "magnetic phenomena" offer empirical proof that the materialist model of the mind is inadequate. Hegel remarks in the same text that "animal magnetism has played a part in ousting the untrue, finite interpretation of Spirit from the standpoint of the understanding" (Hegel, 1817/1971, p. 6; 1817/1986a, p. 15). In animal magnetism, he writes, Spirit's ability to rise above space and time is "manifest in sensuous existence itself" (Hegel, 1817/1971, p. 7; 1817/1986a, p. 16). Further, he

also makes it clear that he regards the ability of his philosophy to account for paranormal phenomena as confirmation of its truth.¹¹

In dealing with the foregoing account, we must first concede that there is a good deal of truth to it. It does seem to be the case that paranormal phenomena frequently involve tapping into a preconscious, primal part of the self. The problem with Hegel's account is that he does not allow for the possibility of a *higher-level conscious experience* in which space-time distinctions are overcome and in which one achieves a kind of *hyperconscious* experience of the oneness of all things. This is, indeed, the nature of what is often claimed to be the classical mystical experience, which cannot be accounted for in terms of Hegel's concept of the primitive soul. In mystical experience, I am not in a somnambulist state; I am fully aware. My consciousness and sense of conscious selfhood are not reduced, but rather heightened and expanded.

It is precisely this sort of hyperconscious mystical experience that some people imagine Hegel may have had. And setting aside what Hegel himself actually said, I will develop a neo-Hegelian account of just such a mystical experience and from there discuss the possibility of a treatment of paranormal or supernormal states quite different from the account offered by Hegel.

What I wish to suggest is simply this: in the mystical experience, we find ourselves in a state in which we *realize* in our own bodily being the truth that is expressed in theoretical form in Hegelian philosophy. Instead of merely conceptualizing the idea that the universe is a whole and that in the widest context everything is a part of that whole, including myself and my body, I literally "feel" (again for lack of a better word) the truth of this. I do not merely mean that I have an emotional attraction to the idea. I mean that I have the nonverbal experience of being one with the whole, of being one moment in the whole, and of being the consciousness of this whole. The normal, commonsense boundaries of myself are canceled, and I am now coterminous with the universe itself. I am the universe. And I am the universe awake to itself.

Now, so far, this is nothing particularly new. And one might respond, with some justification, that we didn't need Hegelianism to describe mystical experience for us in this way. But there is more. In going a step further, I will call attention to a tendency, especially on the part of skeptics, to read what I have said earlier as amounting to "I feel *as if* I am coterminous with the universe itself. I feel *as if* I am the universe, awake to itself." But this is not what I mean at all. And here I must introduce an idea that will no doubt seem radical, especially to skeptics: *the veridical nature of mystical experience*.

To say that mystical experience is veridical means that denying the content of the mystical experience makes as much sense as telling someone that he or she is not *really* feeling pain or not *really* seeing red. Epistemologists

commonly take the position that sensations of pain and pleasure or of color are veridical—meaning that they cannot be wrong. If I am seeing red, then I am seeing red. And if I am seeing red in a hallucination or in a dream, I am nevertheless *still* seeing red (meaning I am having a visual experience of red). Similarly, if I am in pain, I am in pain regardless of whether the source of the pain is psychosomatic. I wish to suggest that mystical experience should be treated in the same manner. If the mystic claims to have had an experience of oneness with the universe, it makes no sense at all to say, “No, you really didn’t.”

The skeptic will ask, however, suppose the mystic has taken so-called hallucinogens (a loaded word if ever there was one)? This fact does not matter in the least. Declaring that the experience is therefore “false” is arbitrary: we could equally well hold that the substance in question revealed aspects of reality or possibilities normally concealed. If under the influence of LSD or psilocybin someone saw red (when there was no red before them in the room present to others), it would make no sense to say, “You did not have an experience of red.” Of course, they did. It is just that the source or catalyst of the sensation of red was not the usual one. Saying that mystical experience is similarly veridical simply means affirming that in the mystical experience we *really are experiencing what we are experiencing*: we *really do* achieve what we later describe as identity with the universe. Characterizing such experiences in language like “I felt *as if* I were one with the universe” is actually a case of self-censorship in the face of anticipated skepticism. And it makes exactly as much sense as saying “I felt *as if* I was seeing red” or “I felt *as if* I were in pain” (in other words, it makes no sense at all).

Skeptics, of course, will not accept any of this. The following hypothetical objection was suggested to me by Paul Marshall (personal communication). Suppose I am walking through town in December and happen to see Santa Claus in his red and white suit. My experience of the redness and whiteness of the suit is indeed veridical: it would not be meaningful to assert that I am “not really” having red and white sense-data. But what about my experience that *this is Santa Claus*? Surely that’s not indubitable since the claim “this is Santa Claus” is an *interpretation* of this object appearing before me redly and whitely. And this interpretation is open to doubt; indeed, it is highly doubtful since (as far as we know) there is no Santa. Similarly, the “unitive feeling” I have in mystical experience is indubitable—there is no question that I am actually having it. But the claim “I became one with the universe” is an interpretation of the experience and open to doubt.

This is a difficult objection to answer, precisely because answering it takes us to the very limits of the ability of rational discourse to speak about mystical experience. Essentially, my response is that a *truth* is conveyed immediately

and directly in the *feeling* that is the mystical experience and not in the form of words (i.e., not propositionally). It is later on that we struggle, rather inadequately, to express this experience in language. We say things like “I became one with the universe.” This is inadequate because the proposition holds apart “I” and “the universe” as separate terms—yet in the experience the proposition purports to describe, the distinction between the two is felt as overcome. (In other words, the experience was not a matter of “getting together” two separate things, “I” and “the universe.”) But this idea simply cannot be adequately conveyed in words (and surely this is another reason we hedge and say “I *felt as if* . . .”). Introducing the language of “identity” is also no help since that implies, once more, separate terms that are brought together and identified.

None of this need trouble us, however. It is the function of the mystical experience to provide a type of *direct* knowledge that can only be imperfectly approached by language, including the language of Hegelian theory. Recall that one of my aims in this chapter is to argue that mystical experience is another, complementary way in which the truth of Hegelian metaphysics is experienced. But let us not lose sight of the fact that *the truth* is something that exists independently of any words used to describe it. Both mystical experience *and* Hegelian philosophy are an approach to that truth. Which is more adequate? This is a question that could be raised only by someone who has never had a mystical experience. In the end, we must stand Hegel on his head and concede that this experience conveys *directly and all at once* the truth that Hegelian texts struggle to convey. And we must also concede that philosophy is only one modality in which metaphysical truth is given.

Of course, this response will not convince the hardened skeptic, who will find it question begging and will accuse me of asserting, in effect, that “mystical experience is veridical because it’s really, really true” (i.e., “mystical experience is veridical because it is veridical”). The only way to banish the specter of this circularity is to embrace it. And the only way to embrace it is to place oneself inside the circle—that is, to actually have a mystical experience. To those who have had such an experience, there is absolutely no doubt that they have had an experience of truth—an ultimate truth that is approximated (but not exhausted) by descriptions such as “oneness with the universe.” It is here that believers and skeptics simply part company, the skeptics to perhaps one day have an experience that would make them believers, the believers to remain believers and *never* become skeptics. There is simply nothing more that can be said. It is like trying to talk about red or white with a blind man who doubts that any such colors exist.

Now, if we are willing to go this far and to affirm that in the mystical experience something like “identity with the whole” is truly achieved (granting, again, that this description is merely an imperfect approximation), we must

still ask *how* this is possible. The Hegelian position can provide an answer to this as well. If everything really is connected to everything else, if every individual is in fact embedded in a larger whole and wholes are nested within wholes in complex lines of interrelation, then what is happening in the mystical experience is that I am suddenly able to be conscious of and through this entire “network” that is the whole itself. To go back to an example given earlier, I know what is going on in my foot through accessing lines of connection of which I am not consciously aware: the nervous system. What I am now suggesting is that in mystical experience, the complex interconnections between all things suddenly become, as it were, channels of awareness through which I am able to feel, *to be* the whole itself. It is as if my body expands to become the greater whole that comprises that body and all others, and the organic connections between all things become the “nerves” in this newly awakened body, nerves along which I feel the whole. Note that the language here of “channels” and “nerves” is metaphorical; we lack the vocabulary to adequately express this idea (and ultimately, perhaps, this is a limitation we cannot completely overcome).

Actually, however, I must correct what I have said above: again, it is not *as if* this happens. What is actually happening is that “my body” *really has* expanded to become the greater whole, and the organic connections between things *really have* become the “nerves” along which I feel the whole. In short, what happens in mystical experience is that *the whole itself wakes up*. This event has, if you will, an epicenter: myself. It “begins” in me. I become the vehicle for the awakening of the whole itself. This is possible, again, because all really is one. The part really is continuous with the whole. In the mystical experience, the part momentarily becomes identical with the whole: it *realizes* (in the sense of *makes actual*) its continuity with all, its place as the nexus of all relations. This act is simultaneously the awakening of the whole to itself.

It is important at this point to emphasize a couple of things. First, in accounts of mystical experience, it is frequently stressed that the individual’s consciousness is somehow “expanded”; they are somehow lifted up, awakened, and so on. This is true in part. But I am putting the stress somewhere else: in mystical experience, what is really occurring is that the universe is awakening to itself, and the individual is in fact the vehicle for this act. The second issue I wish to emphasize is a related point that will inevitably come up when we try to understand this idea of the universe “awakening to itself”: at no point have I appealed to some kind of disembodied spirit or transcendent Absolute. Hegel is constantly being misunderstood as asserting the existence of some such. He does not. And to develop a Hegelian understanding of mystical experience, we do not need any ideas like this. For Hegel, the Absolute is *the whole*. Mystical experience is often glossed as “becoming

one with the Absolute.” But on the account I have given, this does not mean becoming one with some being that transcends the universe: it means becoming one with the universe itself. It bears repeating: if Hegel’s metaphysics is correct, the universe is a one, it is a whole, and we are *already* one with it. Mystical experience is thus an awakening to this fact, not as an idea or theory but as an experience that leads us to say that we literally become the universe itself (or words to that effect). Simultaneously, in this experience—which is wholly conscious, indeed, as I have characterized it, hyperconscious—the universe awakens to itself.

“ABSOLUTE PRESENCE”

Skeptics and even those sympathetic to what I have offered will still hesitate. Exactly *how* do we achieve this state? How do we shift from an awareness of my body as contained within my skin to an awareness of my body as the universe itself?

To sketch an answer to this, let us consider how Hegel thinks we must arrive at the *philosophical*—that is, theoretical—realization of the whole. In the *Phenomenology of Spirit*, Hegel characterizes every mode of human knowledge as a (mostly) unconscious quest for “Absolute Knowing”: “actual knowledge of what truly is,” in other words, knowledge of the whole. But since the achievement of such knowledge would leave behind all partial perspectives, adequate only to this or that part of the whole, Absolute Knowing must begin without any presuppositions whatsoever. In other words, it can presuppose nothing about objects, about the subject, or about how we are to distinguish between what is objective and subjective. Absolute Knowing thus begins by leaving behind the subject–object distinction entirely.

This is how the Logic begins, the first part of Hegel’s system proper (the *Phenomenology* being an “introduction” to the system). At the start of the Logic, thought thinks only a sheer, contentless immediacy that is neither subject nor object. What can thought say about it? Only that *it is*, that it is being. But this is a being wholly without determinations, hence it is also nothing. This is how the dialectic of contradiction in the Logic commences. To make a very long story short, via a circuitous route the Logic arrives at a final category, Absolute Idea, an idea that is an idea of itself. And all the preceding stages of the Logic are “contained” within this Idea like the parts of an organic whole. All previous categories of the Logic are, Hegel says, “provisional definitions” of the Absolute Idea.

The function of the Absolute Idea in Hegel’s system is to serve as the *Idea of the whole* itself: the one that contains the many as so many parts or aspects

or moments, each of which is a “provisional” sketch of the whole itself (e.g., the holism of the crystal is a sketch of the holism of the animal organism, which is a sketch of the human organism, which is a sketch of the universe, the whole, itself). And the whole must become *self-aware*, just as the Absolute Idea is *self-referential*, the idea of itself. Thought moves, in Hegel’s system, from the pure “realm of shades” of the Logic (a realm purely of ideas) to nature, in which we find—as I have discussed already—a scale of forms approximating to the wholeness and self-reference of Absolute Idea. From there, we turn to Hegel’s Philosophy of Spirit, where we discover that the wholeness and self-reference of Absolute Idea is truly realized only in human being.

The Philosophy of Nature and Philosophy of Spirit are thus “applied philosophy” or “applied logic,” as Hegel tells us explicitly. The Logic is the heart of Hegel’s system—and it is reached by this peculiar process of placing the mind in a state in which it thinks neither subject nor object, neither about itself nor about any other. Curiously enough, in describing the pure immediacy with which the Logic begins, Hegel draws the following parallel:

[It] is altogether the same thing as what the Indian calls Brahma [*sic*], when for years on end, physically motionless and equally unmoved in sensation, conception, fantasy, desire and so on, looking only at the tip of his nose, he says inwardly Om, Om, Om, or else nothing at all. This dull, empty consciousness, understood as consciousness, is—*being*. (Hegel, 1816/1986b, p. 101; 1816/1989, p. 97)

Like the Hegelian philosopher, the yogi (of the kind rather condescendingly described by Hegel) has also gone beyond any sort of identification with a determinate object: whether that is a physical object (including his own body) or a thought, feeling, or concern. The difference between the Hegelian philosopher and the yogi, however, is that the former *thinks* being or conceptualizes it. When the Hegelian philosopher begins from a point beyond subject and object, this means only that he does not *think* a determinate subject or object. By contrast, the yogi puts his mind in a state in which he is aware but not *thinking* at all. There is thus a parallel between the state of the Hegelian philosopher and that of the yogi: a giving up of concern with finite things. Yet they are qualitatively different. We can speak of the two states as Absolute Knowing (to use Hegel’s own term) and Absolute Presence (to coin my own rather imperfect one). “Presence” here means being present to being, without attachment—but also without thought.

My suggestion is that just as Absolute Knowing is the vehicle to the *intellectual* realization of the Hegelian theory of the whole, so Absolute Presence is the vehicle to the mystical experience of the truth that is only conceptualized in the Hegelian theory. In other words, putting oneself in a

state in which one is simply present to what is, without attachment and without discrimination, is a means to the achievement of the mystical realization of oneness that is simultaneously *my* realization and that of the universe. This is an inroad to the mystical experience. Why? Because to be present to being without attachment or discrimination—if this point is truly reached—involves an openness to the whole, eschewing any difference between I and it, between my body and the world.

That such a standpoint is conducive to mystical experience will, I think, be accepted by my readers. It is not an unfamiliar claim. And there are many traditions or schools that attempt to cultivate precisely this standpoint—from which, again, can arise (though, notoriously, not always) experiences that answer to the description of the classic “unitive” mystical experience. Zen, Sufism, and the Gurdjieff teaching are but three familiar examples.

However, it will be pointed out, quite correctly, that individuals who are not “on the path” can also have mystical experiences. Individuals who are not *trying* to put themselves into the state I have described above—the state of being present to being, without attachment or discrimination—sometimes spontaneously have mystical experiences. In these cases, I would maintain that such experiences happen as a result of an individual essentially stumbling into a state in which they do, in fact, become *spontaneously* present to being. In other words, both the accidental mystical experience and the one yogis spend years preparing for have a common set of conditions.

To shed somewhat more light on this concept, we may consider how the state of presence to being is treated in the Gurdjieff teaching. There, what is called “self-remembering” involves a shift in attention from thoughts to bodily presence—producing the awareness (as opposed to the *thought*) that “I am here, now.” Such a shift sometimes results in what practitioners characterize as “awakening” (though this experience may be very brief). It seems like a simple thing, shifting attention to being present in the body, but the results may be dramatic. My sense that I am *here, now*, if very deeply felt, may spontaneously lead to a sense of identity or unity with my surroundings. To truly silence the mind’s chatter and genuinely become present in the body is the awakening of one’s whole being and one’s sense of being in the world. But this almost always comes with a sense of being in the world *with others*, embedded in a complex web of relations that one can potentially *feel* all the time but that is drowned out by the mind’s fixations and monologues. Thus, from this simple act of shifting attention to the body, being present in the body, the mystical experience I have described above *may* follow (though, again, it may not).

While this act of shifting attention to being present in the body is deliberately sought in the Gurdjieff work and in other traditions, all of us are aware

that it can occur accidentally or spontaneously as a result of circumstances. Some of my readers have probably had such an experience. There comes an unexpected moment in which suddenly I feel that I am here, now. And from this sometimes follow experiences that accord with the account of mystical experience given earlier.

Now, it was Hegel's position that Absolute Knowing is what makes us truly human. Hegel is not wrong. It is simply that his account is incomplete. For Hegel, Absolute Knowing, or philosophy, is one modality of Absolute Spirit—which simply means human self-consciousness. The other two are art and religion. It would be possible, I suppose, to fold mystical experience into religion, with “religion” construed broadly. But setting aside the objections some would raise to considering mystical experience as always “religious,” we need only note that Hegel does not, in fact, do this. And so I propose that we must expand Hegel's account of Absolute Spirit to include a fourth modality: mysticism—meaning not mystical *writings* (which Hegel considered proto-philosophical) but mystical *experience*.

ACCOUNTING FOR PARANORMAL PHENOMENA

We must now make the connection between the foregoing neo-Hegelian account of mystical experience and paranormal phenomena.¹² We have seen that Hegel considered such phenomena exclusively as a semi-aberrant manifestation of a lower part of the psyche, not under conscious control. I have noted that Hegel's view is not wrong, though still limited: only some instances of paranormal occurrences answer to the description Hegel has given, and, more important, Hegel does not see the possibility of paranormal phenomena issuing from a higher conscious state. Since he does not have room for that possibility, he also does not consider that if such phenomena were possible (again, those under the control of a higher part of the psyche), this would have extraordinarily important implications for our understanding of the most fundamental assertion that Hegel makes about human existence: that it is our vocation to be the whole aware of itself, present to itself.

Actually, developing a more adequate, neo-Hegelian account of paranormal phenomena involves taking just a short step from the account of mystical experience offered earlier. Quite simply, in mystical states it ought to be possible for me, in theory, (1) to have direct knowledge of conditions or states of affairs within the whole that are normally closed to me when I am in a mundane, nonmystical state, and (2) to be able to effect change within the whole, again in ways that would be impossible when I experience “myself” merely as “inside my skin.”¹³

How is this possible? Once more, if everything is connected to everything else (if Hegelian holism is true), then when I make the transition from mundane awareness to identity with the whole, it should theoretically be possible for me to *consciously* utilize those lines of connection as, in effect, “channels” through which knowledge can be had or change effected. (Again, as noted earlier, the language here of “channels” and even of “lines of connection” should be taken as provisional and metaphorical.) This would be in as direct a fashion as when I know, right now, exactly what is happening in my left foot or when I “will” that foot to step forward. If, in a mystical state, the whole is my body, then I may know *that* body or effect change in it in a manner analogous to how I know or effect change in the mundane body I deal with in normal states.

Skeptics will object that this seems awfully mysterious and vague. Just exactly how do “I” act through these “lines of connection” in the universe to effect things or know things at a distance from my mundane body? Just how exactly do I *make* this happen? The best response to the skeptic is to call attention to the fact that how I know my mundane body and how I cause it to move or change is really *just as mysterious*. It is no help to detail the apparatus involved: to speak of synapses, neurons, dendrites, axons, and so on. None of this answers the question that has haunted philosophers from Descartes to Schopenhauer: How do I move my left foot? In other words, how does the conscious self that I call “I” actually *cause* the apparatus to go into action and move the foot? It is thus not a substantive objection to charge, from the point of view of the physicalist, that I have not explained exactly how, in an altered state of consciousness, I am able to affect objects at a distance (e.g., using psychokinesis) given that the same physicalism cannot even explain how I am able to lift my left foot. Note that it is no response to this to say that science has given us a detailed account of the mechanism connecting brain and foot—in fact, this completely misses the point. The philosophical issue is not about how the *brain* moves the foot; rather, it concerns how the “I”—my interior, conscious self or ego—is able to cause a physical change in the body. And what is that “I”? Where is it? It is not clear that it is the brain or even a part of the brain.

Now, taking things a step further, imagine if someone claimed that because we cannot explain exactly how I lift my left foot, lifting it is therefore impossible. I would, of course, counter that since I *actually have* lifted my left foot, it follows that it must be possible (on the principle that whatever is actual is possible). Similarly, we may respond to the physicalist who is skeptical about paranormal phenomena—whether consciously willed or not—that we *actually have* produced these phenomena; therefore, they are possible. As discussed in *Irreducible Mind* and *Beyond Physicalism*, the evidence for the existence of these phenomena is now overwhelming.

As to the actual “apparatus” involved in making these phenomena possible—the nitty-gritty explanation, as it were—this is a matter for science to resolve. In other words, it is left for science to explain *exactly how* I, in a transformed state, *cause* psychokinetic phenomena or remotely view a distant situation (or to answer the question of how *exactly* I tap into those “lines of connection” running throughout the whole). Here, obviously, I mean a new kind of science—one that still seeks verifiable results and empirical evidence (broadly construed) but one that has abandoned the narrow strictures of physicalism. It is not the job of the philosopher to provide such an account. The philosopher’s contribution is to provide a theoretical alternative to physicalism—in effect, a theoretical hypothesis from which scientific investigation could proceed.

In this regard, it is extraordinarily important to keep in mind that physicalism is not a theory *derived from* scientific investigation; it is a theory that scientists *bring to* their research and that guides them, leading them to include or exclude certain questions or avenues of inquiry. All science must proceed from a framework of theoretical assumptions. The problem with physicalism is not that it is a presupposition but that it is the wrong presupposition (a fact revealed, as detailed in *Irreducible Mind* and *Beyond Physicalism*, by the accumulation of anomalies for which it simply cannot account).

The relation of philosophy to science is thus that the philosopher (1) critiques the theoretical assumptions made by scientists in their work (the point Collingwood [1940] emphasized in his *Essay on Metaphysics*) and (2) attempts to provide a theoretical framework that would function both to *unify* the findings of science (to unite or reconcile different findings) and to serve as a set of fruitful assumptions for future scientific research—fruitful in that they would further illuminate our world for us. This theoretical framework *cannot* result from scientific method per se—that is, not from observation and experiment alone. It is produced either by philosophers conversant with science (e.g., Hegel and his modern interpreter Errol Harris, to name only two) or by scientists who spend part of their time thinking like philosophers (e.g., David Bohm and Erwin Schrödinger).

Now, the careful reader will have noted in the foregoing that when I spoke of how paranormal phenomena might be consciously effected and controlled in an altered, mystical state, I twice asserted that this was possible “in theory” or “theoretically.” I must now clarify what I mean by this. I do *not* mean that this has not yet occurred but might still occur. Obviously, it actually has occurred. Rather, I used the language of “theoretically” to acknowledge that there is an enormous leap involved in the account I have given: the leap from mystical states to the conscious manipulation of paranormal phenomena (*sidhis*, in short). Some of my readers may have experienced mystical states of

the kind I have described. Most, however, have probably not had the experience of being able to spontaneously move from these states to consciously accessing clairvoyant knowledge or producing psychokinetic phenomena. Thus, for most of us, even those who have experienced profoundly moving mystical states, the shift from this to the production of *siddhis* will seem an enormous step. (It is not, I hasten to admit, a step that I have taken.) For most of us, therefore, it remains a theoretical possibility, though a real one, since we have credible evidence that this has been achieved by others.

So what is stopping us? How is it that I can have a mystical experience, that I can become identified with the whole—and really *be* the whole—yet not be able to effect change at will within my “world body” as I can within my mundane body? The answer I find inescapable is that there are *levels* of mystical experience. This fact ought to be immediately obvious. Some mystical experiences involve just a fleeting but very striking sense of being here, now, a sense of suddenly being expanded, of things “opening up” in a way that makes our mundane experience seem precisely that. Others, however, have had the same sort of experience in a more prolonged and intense form. They have felt that their selves, their bodies, had been “expanded” and were identical with the whole. And on some of those occasions, they have had what we could characterize as “mystical visions,” in which some specific, supernormal content or information seemed to be delivered to them.

Mystical experience versus mundane experience is thus not a matter of “either—or”: it is not a matter of “either I’m experiencing myself in this limited body, in my ordinary fashion, *or* I am absolutely one with the whole.” Rather, it is a matter of degree. This is precisely what Hegel’s approach would lead us to expect. I argued earlier that, according to Hegelianism, there is no sharp discontinuity in levels of consciousness; rather, each succeeding level is a higher synthesis, a greater achievement of “wholeness.” We should thus expect that there would be levels of mystical experience, differentiated in terms of the degree of identification with the whole.

While having such experiences, individuals often hover delicately between being absorbed into identification with the whole and slipping back into the ordinary perspective. Often, this manifests itself in wavering between *having* the experience and *thinking* or theorizing about it. When the former is occurring, the “I” has been expanded to become something much larger. But when “I” begin to think about this, the “I” that thinks is actually a reversion to the mundane ego now struggling to understand what has just occurred. In that shift, I “give up” (or even “refuse”) the experience.

If we acknowledge that there are different levels of mystical experience, then the one from which conscious, controlled *siddhis* might be possible should be understood simply as a higher level that most of us do not reach.

So, again, what is stopping us? I believe that a plausible answer is to be found in Loriliai Biernacki's (2015) account of Abhinavagupta's Tantra. She tells us that for Abhinavagupta, higher-level mystical states such as I have described, as well as *siddhis*, are in principle accessible to all, but we do not actualize this potential because of our own limiting self-conception. For Abhinavagupta, this involves three elements:

- (1) an identification with repercussions of former deeds known as *karma mala*, the stain of karma, (2) an identification with an essential sense of otherness, duality, *māyīya mala*, the stain of *māyā*, and (3) an essential and usually unarticulated conception of the self as inherently limited, *aṇava mala*, the stain of smallness. (p. 371)

It is this third element that I believe is key here. Even in profoundly moving mystical experiences, some self-limiting factors are still in play. I have already spoken of the phenomenon of individuals oscillating between entering into the experience and then retreating from it. Many individuals have had the experience of mentally "pulling back" from a very intense experience, precisely out of fear that the "I" was being swept away. It follows that those who are able to attain the highest mystical states, in which *siddhis* are possible, are those able to overcome self-limiting factors such as fear or guilt. This is something we can strive for but not something we will all attain.

Ultimately, the reasons why some people are able to attain mystical states, to one degree or another, whereas most remain permanently "flat souled" will probably always remain mysterious. But we should not expect anything else. We are not surprised that only some people are able to understand higher mathematics while others (like myself) can barely balance their checkbooks. We are not surprised that not everyone can become a violin virtuoso or recite all of Homer from start to finish. Individuals are individual precisely through their limitations. (I am this and not that; I have more of this and less of that.)

This is something that Hegel clearly recognized. He argued, as I have discussed, that in human beings—through Absolute Spirit, preeminently through philosophy—the whole achieves consciousness of itself. Human beings are the vehicle of this. But Hegel did not mean to imply that *all* human beings participate in this process. If I am correct to argue that mystical experience constitutes another modality of Absolute Spirit (Absolute Presence rather than Absolute Knowing), then our expectations about how frequently this modality will be actualized by individual human beings should be equally realistic.

So, to be clear, I do not find that I can endorse the idea that the widespread attainment of higher states is a coming, future stage in human evolution. There is no cogent argument I know of that would prove the inevitability of such a progression. (And here I must remind my readers that Hegel is not

Marx: the dialectic allows us to understand what has been, *not* to predict what must be.) My own position about the potential of human beings to evolve toward the experience of higher states is close to that of P. D. Ouspensky (1950) in his *Psychology of Man's Possible Evolution*. Ouspensky argued that a higher state of consciousness is attainable, but only through conscious, individual choice and work. Realistically, very few will make that choice, and fewer still will do the work.

To be sure, the neo-Hegelian account of evolution given in this chapter does imply that a process has unfolded in nature whereby higher and still higher forms of consciousness have come into being, all working closer and closer toward the *telos* of revealing the universe to itself—a *telos* that is reached in human spirit, in our capacity to be philosophers and mystics. For Hegel, this process is *natural* in the sense that it is literally the self-specification of the whole. But the next stage seems to be up to us, as individuals, to choose.

Indeed, I would put the point in even stronger terms and argue that it is actually *incoherent* to suggest that the human race *as a whole* might somehow, someday, evolve toward the capacity for higher states through a natural or inevitable process that they do not themselves will on an individual level. The attainment of higher states involves becoming free of mechanicalness; it involves ceasing to be merely the plaything of forces (including the natural forces that move biological evolution) and rising to a level of conscious awareness that is absolutely free because it is infinite: identified with the whole itself. Thus, if it is possible for us to evolve toward a higher state of consciousness, we cannot expect this to *happen to us*—that is, we cannot expect it to happen mechanically through “evolution” understood as some kind of inevitable process. It must be chosen.

NOTES

1. Here my approach is quite similar to that of Paul Marshall (2015), who writes that “if deep connections exist between mystical experience and other types of extraordinary phenomena, such as the psychical range of perceptions, then the study of mystical experience is likely to contribute significantly to the explanation of these other phenomena” (p. 40, italics omitted).

2. In what follows, I will not always distinguish carefully between what is “Hegelian” and what is “neo-Hegelian.” This is a philosophical essay, not a scholarly essay on what Hegel himself did or did not say.

3. I do not italicize the names of the divisions of Hegel’s philosophy, only the titles of his books—thus, Logic versus *The Science of Logic*. The Philosophy of Nature and Philosophy of Spirit are also divisions within Hegel’s system, not titles of books by Hegel.

4. For a general discussion of the nature of Hegel's metaphysics, see Magee (2016).
5. As Edward F. Kelly (2015) notes, the ability of the (human) organism to unify even the elements of visual stimuli alone into the experience of a single object is itself a problem for the physicalist account of mind: "It turns out that different properties of a visual object such as its form, color, and motion in depth are handled individually by largely separate regions or mechanisms within the brain. But once the stimulus has been thus dismembered, so to speak, how does it get back together again as a unit of visual experience? Only one thing is certain: the unification of experience is not achieved anatomically. There are no privileged places or structures in the brain where everything comes together, either for the visual system itself or for the sensory systems altogether" (p. 21). The unity of experience is a major preoccupation of many neuroscientists. For a fuller discussion, see Kelly (2007).
6. Like Marshall, I will focus here on so-called extrovertive mystical experiences. See Marshall (2015, pp. 47–48).
7. See Magee (2008a, 2008b, 2009, 2013a, 2013b).
8. Not to be confused with the *Phenomenology of Spirit*, a different text and a different part of Hegel's system.
9. In Hegel's philosophy, it is the business of *Vernunft* (reason) to transcend *Verstand*. Hegel here uses "reason" in his own idiosyncratic way as a form of dialectical thought that thinks beyond the understanding's obsession with "either–ors." In more than one text, Hegel actually identifies the standpoint of this sort of philosophy (which he also calls "speculation") with "what used to be called" mysticism. For a full discussion of this, see Magee (2013b).
10. For a similar suggestion, see Marshall (2015, pp. 59–60).
11. For more on these matters, see Magee (2008c).
12. Mystical experience is not usually characterized as "paranormal." My use of the term "paranormal phenomena" has the same, familiar denotation as "psychic phenomena" and includes such things as precognition, telepathy, clairvoyance, psychokinesis, and so on.
13. Here again, my approach is similar to that of Marshall (2015), who writes, "There is, then, reason to entertain the possibility that the mystic's eternal moment is metaphysically significant and to make the following two-part conjecture: (1) the universe exists as a spatiotemporal whole in which all concurrent and successive states of things exist together; (2) the full spatiotemporal range of contents is open to inspection in certain mystical states, and information about specific contents can be accessed in retrocognitive, clairvoyant, and precognitive psi. Furthermore, the mystical data suggest that this spatiotemporal whole is not some lifeless repository of events but is vibrant with animation" (p. 53).

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ANALYTIC IDEALISM AND PSI

How a More Tenable Metaphysics Neutralizes a Physicalist Taboo

Bernardo Kastrup

For at least a century, the mainstream physicalist metaphysics—according to which phenomenal consciousness either is an emergent epiphenomenon of matter or, absurdly, doesn’t even exist—has dominated the West’s intellectual establishment. As a side effect of this peculiar cultural situation, paranormal or psi phenomena have been considered a priori false by the Western mainstream, for an implication of physicalism is precisely that such phenomena cannot exist.

As cracks now begin to appear in the physicalist armor and more plausible metaphysics—such as “analytic idealism,” a form of metaphysical idealism developed along the lines of analytic as opposed to continental philosophy—are openly discussed in mainstream scholarly publications, the stigma of psi may be beginning to ease. The opportunity for a new era of academically respected, well-staffed, and well-funded psi research may be close at hand, with all the benefits and advances such a development would bring.

I begin this chapter by reviewing the main problems of mainstream physicalism and its close sibling, constitutive panpsychism (sometimes referred to as bottom-up panpsychism), neither of which is conducive to psi. Thereafter, I summarize and review analytic idealism: a metaphysics that posits spatially unbound, universal phenomenal consciousness to be nature’s sole fundamental ground, all natural phenomena being ultimately reducible to that universal. I argue—on the basis of internal logical consistency, parsimony, and empirical adequacy—that analytic idealism is a superior metaphysics to both mainstream physicalism and constitutive panpsychism.

Specifically regarding empirical adequacy, I show that a broad pattern of observations in psychiatry and neuroscience is consistent with analytic idealism: certain forms of impairment of ordinary brain function have been

observed to correlate with an *expanded* sense of self-identity or experiential *enrichment*, the opposite of what mainstream physicalism predicts. From this empirical basis, I proceed to address the question of postmortem survival and explore what analytic idealism may have to say about it.

The key challenge for analytic idealism regarding psi phenomena is the mirror image of that faced by mainstream physicalism: the idealist must explain why psi phenomena aren't happening *all the time*. After all, if all individual minds are ultimately grounded in one single universal consciousness, what must be made sense of is why we can't ordinarily read each other's thoughts or become experientially acquainted with everything that is happening across the universe.

I argue that severe forms of dissociation, which are well known in psychiatry, offer a compelling empirical analogy for explaining the emergence of seemingly individual minds in nature. This way, under analytic idealism, certain psi phenomena, such as telepathy and clairvoyance, can be interpreted as the result of suboptimal dissociation—porous dissociative boundaries—and are thus natural occurrences with a coherent metaphysical basis. However, I shall refrain from commenting on precognition and psychokinesis because these particular phenomena are directly related to the nature of spacetime and would therefore require a book-length treatment to be addressed properly.

In what follows, I use the words “consciousness” and “mind” interchangeably in the sense of *phenomenal consciousness*—that is, raw subjective experience—which does not necessarily entail cognition, metacognition, self-awareness, or any other higher mental function.

THE INSOLUBLE PROBLEMS OF MAINSTREAM PHYSICALISM

We live in an age of science that has enabled technological advancements unimaginable to our ancestors. Unlike philosophy, which depends somewhat on certain subjective values and one's own sense of plausibility to settle questions, science poses questions directly to nature, often in the form of experiments. Nature then answers by displaying certain behaviors so that questions can be settled objectively.

This is both science's strength and its Achilles' heel: experiments tell us only how nature *behaves*, not what it essentially *is*. Many different hypotheses about nature's essence are consistent with its manifest behaviors. So, although such behaviors are informative, they can't *settle* questions of being, which philosophers call metaphysics. Understanding nature's essence is fundamentally beyond the scientific method, and this leaves us with the methods of philosophy.

Physicalism—the view that nature is fundamentally constituted by matter, energy, or fields outside and independent of mind—is a *metaphysics* in that it makes statements about what nature essentially *is*. As such, it is also a theoretical inference: we cannot empirically observe matter outside and independent of mind, for we are always locked within mind. All we can observe are the contents of perception, which are inherently mental. Even the output of measurement instruments is accessible to us only insofar as it is mentally perceived.

We infer the existence of something beyond mental states because, at first, this seems to make sense of three canonical observations:

1. We all seem to share the same world beyond ourselves.
2. The behavior of this shared world doesn't seem to depend on our volition.
3. There are strong correlations between our inner experience and measurable patterns of brain activity.

A world outside mental states, which we all inhabit, makes sense of observation 1. Because this shared world is thus nonmental, it isn't acquiescent to our (mental) volition, thereby explaining observation 2. Finally, if particular configurations of matter in this world somehow generate mentality or consciousness, it could also explain observation 3. And so our culture has come to take for granted that nature is essentially material, nonmental. Again, this is a metaphysical inference aimed at tentatively explaining the canonical observations listed above, not a scientific or empirical fact.

The problem is that such metaphysical inference is untenable on several grounds. For starters, there is nothing about the parameters of material arrangements—say, the position and momentum of the atoms constituting our brains—in terms of which we could deduce, at least in principle, how it feels to fall in love, to taste wine, or to listen to a Vivaldi sonata. There is an impassable explanatory gap between material *quantities* and experiential *qualities*, which philosophers refer to as the hard problem of consciousness (Chalmers, 2003). Many people don't recognize this gap because they think of matter as already having intrinsic qualities—such as color, taste, and so on—which contradicts mainstream physicalism: according to the latter, color, taste, and so on are all generated by our brain, inside our skull. They don't exist in the world out there, which is supposedly purely abstract and exhaustively describable by quantities.

Second, physicalism lives or dies with what physicists call *physical realism*: there must be an objective world out there, consisting of entities with defined properties, whether that world is being observed or not. The problem here is that microphysics experiments over the past four decades have now

refuted physical realism beyond reasonable doubt (see below). So, unless one redefines the meaning of the word “physicalism” in a rather arbitrary manner, *metaphysical* physicalism is now *physically* untenable.

Third, a compelling case can be made that the empirical data we have now amassed on the correlations between brain activity and inner experience cannot be accommodated by physicalism (Kelly et al., 2007). As I discuss later in this chapter, there is also a broad pattern associating certain forms of *impairment* or *reduction* of brain processes with an *expansion* of awareness, an *enrichment* of experiential contents and their felt intensity (Kastrup, 2017a). It is at least difficult to see how the physicalist hypothesis that all experiences are somehow generated by brain metabolism could make sense of this.

Finally, from a philosophical perspective, physicalism is at least unparsimonious—that is, uneconomical, unnecessarily extravagant—and arguably even incoherent. Coherence and parsimony are admittedly somewhat subjective values. However, if we were to abandon them, we would have to open the gates to all kinds of nonsense: from aliens in the Pleiades trying to alert us to global catastrophe to teapots in the orbit of Saturn—neither of which can be empirically disproven. So we cannot abandon parsimony and coherence, which then means that we have to apply them *consistently*, even to physicalism itself.

Physicalism is unparsimonious because, in addition to or instead of mentality—which is all we ultimately know—it posits another category of substance or existent fundamentally beyond direct empirical verification: namely, matter. Under physicalism, matter is literally transcendent, more inaccessible than any hypothetical spiritual world posited by the world’s religions (the latter can, ostensibly, at least be accessed on bodily death). This would be justifiable only if there were no way of making sense of the three canonical observations listed earlier on the basis of mind alone, but—as discussed later in this chapter—there is.

Physicalism conflates the need to posit something outside our *personal* minds with having to posit something outside mind *as a category*. All three canonical observations above can be made sense of if we postulate a *transpersonal* field of mentation beyond our personal psyches. Under this scenario, there is indeed a world out there, beyond us, that we all inhabit, but this world is *mental*—constituted by *experiential* states—just as we are intrinsically mental agents. Seeing things this way completely circumvents the hard problem of consciousness, as we no longer need to bridge the impassable gap between mind and non-mind, quality and quantity: everything is now mental, qualitative, perception consisting solely in a modulation of one (personal) set of qualities—namely, the contents of perception—by another (transpersonal) set of qualities—namely, the experiential states that constitute the environment we inhabit. We know this isn’t a problem because it happens every day:

our own thoughts and emotions, despite being qualitatively different, modulate one another all the time. I elaborate more on all this later in this chapter.

Finally, physicalism is arguably incoherent. As we have seen, matter is a theoretical abstraction in and of mind. So, when physicalists try to reduce mind to matter, they are effectively trying to reduce mind to one of mind's own conceptual creations (Kastrup, 2018b). This is akin to a dog chasing its own tail. Better yet, it is like a painter who, having painted a self-portrait, points at it and proclaims himself to *be* the portrait. The ill-fated painter then has to explain his entire conscious inner life in terms of patterns of pigment distribution on canvas. Absurd as this sounds, it is very much analogous to the situation physicalists find themselves in.

The popularity of physicalism is founded on a confusion: somehow, our culture has come to associate it with science and technology, both of which have been stupendously successful over the past three centuries. But that success isn't attributable to physicalism; it is attributable, instead, to our ability to inquire into, model, and then predict nature's *behavior*. Science and technology could have been done equally well—arguably even better—without any metaphysical commitment, or with another metaphysics consistent with such behavior.

Indeed, in order to relate daily to nature, human beings need to be able to tell themselves a story about what nature is. It is psychologically very difficult to remain truly agnostic regarding metaphysics, particularly when one is doing experiments. Even when this internal story is subliminal, it is still running like a basic operating system. And so it happens that physicalism, because of the unreflective way in which it appeals to superficial appearances, offers a cheap and easy option for such inner storytelling. In addition, it has arguably enabled early scientists and scholars to preserve a sense of meaning at a time when religion was losing its grip on our culture (Kastrup, 2016).

But now, in the twenty-first century, we can surely do better than that. We are now in a position to examine our hidden assumptions honestly, confront the evidence objectively, bring our own psychological needs and prejudices to the light of self-reflection, and then ask ourselves, "Does physicalism really add up to anything?" The answer should be obvious: it just doesn't. Physicalism is a relic from an older, more naive and less sophisticated age when it helped investigators separate themselves from what they were investigating, but it has no place in this day and age.

THE INSOLUBLE PROBLEMS OF CONSTITUTIVE PANPSYCHISM

The key problem of mainstream physicalism is its fundamental inability to explain the *felt qualities* of experience in terms of the *measurable quantities*

of physics. There is nothing about the mass, charge, spin, position, or momentum of the particles making up our brain—to which all neurophysiology is putatively reducible—in terms of which we could deduce, at least in principle, what it *feels* like to taste an orange, fall in love, or have a bellyache. Qualities and quantities are incommensurable domains, and so physicalism fails to explain experience, the one thing we know with certainty to exist.

A relatively popular approach to circumvent this central limitation is to attribute *fundamental experiential properties* to matter in addition to matter's acknowledged physical properties. In other words, next to having mass, charge, and momentum, particles of matter are imagined to *feel* simple feelings.

This approach is called constitutive panpsychism. According to it, subatomic particles such as quarks, leptons, and bosons have experiences of their own. In other words, the claim is that there is something it *feels* like to *be* an electron, a quark, or a Higgs boson; their experiential states are allegedly an irreducible property of the particles themselves. This way, our complex conscious inner life is supposedly constituted by some form of combination of the experiential states of myriad particles forming our brain.

I fully understand the urge to circumvent the failures of physicalism. But the question is whether simply *adding*—next to mass, charge, and spin—fundamental experiential properties to matter is a persuasive and legitimate way out or just avoids the need for explanation. You see, I can easily accept that my cats are conscious, perhaps even the bacteria in my toilet. But it is at least difficult to imagine that a grain of salt contains a whole community of little conscious subjects.

The panpsychist's motivation for wanting even the humble electron to have an experiential aspect is to treat experiential states in a way analogous to how physical properties are treated in chemistry: as the physical properties of particles combine in atoms, molecules, and higher-order structures to give rise to emergent macroscopic properties—such as the wetness of water—the panpsychist wants the experiential states of particles in our brain to combine and give rise to our integrated conscious inner life. The idea is *to fold experience into the existing framework of scientific reduction and emergence*; therein resides most of the appeal and force of constitutive panpsychism.

To do so, the panpsychist takes subatomic particles to be *discrete little bodies with defined spatial boundaries*. Their respective experiential states are thought to be encompassed by such boundaries, just as our human experiences seem to be encompassed by our skull. Indeed, since each person's consciousness does not (at least ordinarily) float out into the world but is personal in the sense of being limited by the boundaries of the person's body, so subatomic particles are understood by the panpsychist as discrete little bodies, each containing a separate and independent subjectivity.

The panpsychist then posits that the inherent subjectivity of different particles can combine into compound subjects if and when the particles touch, bond, or otherwise interact with one another in some chemistry-like manner.

Notice that this approach makes sense only through analogy with physical properties: the mass of an electron is “held” within the electron’s boundaries; therefore, it’s only logical—the argument goes—that its experiential states should also unfold within the same boundaries. Or is it?

The problem is that subatomic particles *aren’t* discrete little bodies with defined spatial boundaries; the latter is a simplistic and outdated image known to be wrong. According to quantum field theory—the most successful theory ever devised in terms of predictive power—elementary particles are just *local patterns of excitation or “vibration” of a spatially unbound quantum field* (e.g., Maggiore, 2005). Each particle is analogous to a ripple on the surface of a lake: we can determine the location of the ripple and characterize it through physical quantities such as the ripple’s height, length, breadth, speed, and direction of movement. Yet there is nothing to the ripple but the lake: we can’t lift it out of the lake, for the ripple is merely a pattern of movement of the water itself. Analogously, according to quantum field theory, an elementary subatomic particle is just a pattern of excitation or “vibration” of an underlying quantum field. As with the ripple, we can determine the particle’s location and characterize it through physical quantities such as mass, charge, momentum, and spin. Yet there is nothing to the particle but the underlying quantum field. The particle *is* the field, “moving” in a certain manner.

What is fundamental in nature is the quantum field, not the elementary subatomic particle it happens to form through excitation or “vibration”; after all, the latter is, by definition, reducible to the former. The panpsychist is thus forced to attribute consciousness not to the particle *but to the underlying field itself*. Indeed, under panpsychism, the particle can represent only a particular modulation or configuration of the experience of the underlying field. Panpsychism is physically coherent only if the quantum field is conscious *as a whole*, as a unitary subject. And because the field doesn’t have spatial boundaries, *constitutive panpsychism implies universal consciousness and fails to explain our own personal subjectivity*. This points not merely to a gap in the panpsychist program but also to a fundamental contradiction in its rock-bottom conceptual foundation.

Here the panpsychist could counterargue that the physical properties of an elementary subatomic particle—such as mass, charge, and spin—are localized and belong *to the particle*, not to the whole quantum field. After all, these properties are akin, in the analogy above, to the height, length, and breadth of the ripple, which are indeed *local properties of the ripple*, not of the whole lake.

Therefore, the argument goes, why can't we say that experiential states, too, belong to the particle alone, not to the quantum field as a whole?

The answer is: because saying so precipitates the exact same hard problem of consciousness that panpsychism was meant to circumvent in the first place. Allow me to elaborate.

One can easily deduce or predict the *quantitative* parameters that define a ripple (e.g., height, length, and breadth) from the equally *quantitative* parameters that describe the behavior of the lake (e.g., frequencies and amplitudes of oscillation). Physicists do it all the time in the field of fluid dynamics. Deducing the *quantitative* physical properties of a particle from the *quantitative* physical parameters that describe the underlying quantum field is entirely analogous. There is thus no fundamental problem in deducing quantity from quantity.

However, deducing *quality* from quantity is something entirely different. Experiential states are *qualities*; they cannot be exhaustively described in quantitative terms. No numerical parameter can tell someone with congenital blindness what it feels like to see red or someone who never fell in love what it feels like to, well, fall in love. Indeed, this is precisely the so-called hard problem of consciousness that plagues mainstream physicalism and motivated the creation of panpsychism. One cannot make an unconscious quantum field give rise to a conscious particle for exactly the same reasons that one cannot make an arrangement of matter give rise to experience. Therefore, once again, panpsychism either defeats its own purpose or must attribute consciousness to *the quantum field as a whole*, as a fundamental property of *the field*, which implies universal consciousness and fails to explain our private inner lives (it is conceivable that additional, to-be-developed elements in a panpsychist theory could account for a localization or dissociation of field consciousness but not panpsychism as it is presented today).

Granted, this is not what the panpsychist was bargaining for. For in light of such insight, micro-level experiential states cannot be treated analogously to physical properties in chemistry. Indeed, these states can no longer be local, encapsulated in little bodies of matter—as physical properties can still be imagined to be—but “smeared out” across spacetime instead. The entire rationale for explaining our conscious inner life through the combination of discrete experiential states at a microscopic level goes out the window: there is nothing to be combined within the boundaries of our skull anymore, just spatially unbound, universal fields and their patterns of excitation. Constitutive panpsychism cannot explain private, individual experience.

This is a coup de grâce, for the idea that microscopic subjects of experience can somehow combine to form seemingly unitary, macroscopic ones already constitutes a hard problem in its own right (Chalmers, 2016): What kind of

magical interaction between two particles could possibly have the extraordinary effect of combining two fundamentally distinct fields of subjectivity?

Even the logic underpinning constitutive panpsychism is faulty: the panpsychist attributes to the *subject* of perception a structure discernible only in *that which is perceived*. That the physical world we see seems “pixelated” at the level of elementary subatomic particles may be an artifact of *the screen of perception*, not a reflection of the structure of the *perceiver*. As an analogy, notice that the image of a person on a computer screen appears pixelated when looked at closely. Yet this doesn’t mean that the person is herself made of discrete rectangular blocks! The pixelation is an artifact of *the screen*, not the structure of the person represented on it. By the same token, that our body is made of subatomic particles says something about how we are *represented* on the screen of perception, not necessarily about the subject that does the perceiving.

Don’t get me wrong: the panpsychist is going in the right direction in considering consciousness irreducible, and such openness is a valuable commodity in our overwhelmingly physicalist culture. My hope is that, freed from the missteps discussed earlier, the panpsychist finds intellectual space to contemplate a more promising alternative—one that entails leaving every vestige of physicalism behind instead of striking a halfway compromise. The driving idea is that, in lieu of preserving physical properties alongside experiential states as fundamental aspects of nature, the way to go is *to reduce what we customarily think of as “the physical” to the experiential*.

You see, every scientific and philosophical explanation entails reducing a phenomenon to some other aspect of nature, different from the phenomenon itself. For instance, we reduce or explain a living organism in terms of organs, organs in terms of tissues, and tissues in terms of cells, molecules, atoms, and subatomic particles. But because we can’t keep on explaining one thing in terms of another forever, at some point we hit rock bottom. Whatever is then left is considered our “reduction base”: a set of fundamental or irreducible aspects of nature that cannot themselves be explained but *in terms of which everything else can*. Under physicalism, the elementary subatomic particles of the standard model or their associated fields—with their intrinsic physical properties—constitute the reduction base.

To circumvent physicalism’s failure to explain experience, the panpsychist simply *adds* experience—with all its countless qualities—to the reduction base. Arguably, this just evades the problem: inflated reduction bases don’t really explain anything; they just provide subterfuge for avoiding explanations. A good rule of thumb is that the best theories are those that have the *smallest* base and then still manage to explain *everything else* in terms of that. On this account, panpsychism just isn’t a good theory.

More effective alternatives to physicalism are those that *replace* elementary particles with experiential states in their reduction base as opposed to simply *adding* experiential elements to it. We call this class of alternatives idealism. And then the most parsimonious formulations of idealism are those that have *one single element* in their reduction base: *universal consciousness itself*, a spatially unbound field of subjectivity whose particular patterns of excitation give rise to the myriad qualities of empirical experience. Under such a theory, a unified quantum field *is* universal consciousness. Indeed, notice that all we know about the unified quantum field is ultimately derived from thought and perception—even if the latter is aided by instrumentation, the output of which is also only known insofar as it is perceived—both of which are experiential in nature.

In the next section, I summarize a modern formulation of idealism called *analytic idealism*. Unlike constitutive panpsychism, analytic idealism does *not* suffer from the subject combination problem and *can* explain how our private, personal subjectivities arise within universal consciousness.

AN INTRODUCTION TO ANALYTIC IDEALISM

Mainstream physicalism and constitutive panpsychism are untenable. The alternative that circumvents all the problems reviewed above is analytic idealism (Kastrup, 2018a, 2019). According to it, the ground of existence is universal phenomenal consciousness. Everything else is reducible to configurations and patterns of excitation of universal consciousness. This does not mean that spoons and home thermostats are conscious in and of themselves; that's panpsychism. Nor does it mean that reality exists in your or my *individual* mind alone; that's solipsism. Instead, analytic idealism acknowledges that other living beings—that is, metabolizing organisms—have a conscious inner life of their own. It also acknowledges that there exists something out there, beyond individual minds, that would continue to exist even if no one were looking at it. However, this “something out there” is itself *experiential* in nature—that is, it consists of *transpersonal mental activity*. Such mental activity presents itself to us as the inanimate universe. From this perspective, analytic idealism is consistent with how David Chalmers (2020) defines “objective idealism.”

Philosophical considerations aside, *experimental* results emerging from the field of foundations of physics make clear that whatever is out there, beyond individual mentation, does not have a definite state before it is observed (Gröblacher et al., 2007; Hensen et al., 2015; Kim, Yu, Kulik, Shih, & Scully, 2000; Lapkiewicz et al., 2011; Ma et al., 2013; Manning, Khakimov, Dall, &

Truscott, 2015; Romero et al., 2010; Tittel, Brendel, Zbinden, & Gisin, 1998; Weihs, Jennewein, Simon, Weinfurter, & Zeilinger, 1998). In other words, the external environment, as it is in itself, is not composed of classically conceived objects with definite form, position, momentum, and so on. It consists instead of superposed possibilities or tendencies.

Metaphysically, analytic idealism interprets this as follows: the transpersonal mental activity that surrounds us is best understood as multivalent thought processes of the kind we experience, for instance, when we weigh different possible decisions without being sure of which one to take. Therefore, although there indeed is a world out there, this world isn't *physical* in the sense we ordinarily attribute to the word; physical properties result, instead, from an interaction between our own mental processes and the transpersonal mental processes within which we live. This interaction is what physicists call observation or measurement, which cognitively magnifies one of the superposed possibilities out there, leading to the impression that we inhabit a definite physical world.

As such, the physical world is merely an image in the private mind of the individual observer; each one of us perceives our own physical world as defined by the context of our own observations. Analytic idealism can thus also be regarded as “subjective idealism” (Chalmers, 2020) with respect to physicality. But don't get me wrong: under analytic idealism, we *do* inhabit a common environment independent of us all; it's just that this common environment, in and of itself, does not rest on the well-defined properties we customarily associate with physicality.

All this, of course, immediately raises the following question: What is our relationship, as minded individuals, to the hypothesized transpersonal mind that surrounds us all? As someone who considers parsimony a key guiding value in metaphysics, I believe there is ultimately only *one*, universal consciousness. I think we, along with all other living beings, are merely *dissociated mental complexes*—alters—of this fundamentally unitary universal mind. This is akin to how a person suffering from dissociative identity disorder also manifests multiple disjoint centers of awareness.

The boundary of dissociation is what separates us from our environment and each other—that is, it inferentially isolates our personal mental processes from transpersonal ones. The way this boundary presents itself on the screen of perception is what we call our skin and other sense organs. As experienced from the inside—that is, from a first-person perspective—each living being, plus the inanimate universe as a whole, is a conscious entity. But as experienced from the outside—that is, from a second- or third-person perspective—our respective inner lives present themselves in the form of what we call matter, or physicality. Indeed, according to analytic idealism, matter—*all*

matter—is merely the name we give to what conscious inner life looks like *from across its dissociative boundary*. That’s why there are such tight correlations between inner experience and measurable patterns of brain activity.

Finally, an important element of analytic idealism is that the transpersonal mental processes that underlie and ground the inanimate universe do not necessarily entail metacognition. This concept may need some brief unpacking: Metacognition is our human ability to explicitly evaluate our own mental activity, which requires more than just raw phenomenal consciousness. An experience is metacognitive if, in addition to having the experience, the subject knows *that* he or she has the experience (Kastrup, 2017b). Metacognition enables deliberation, reasoning, and planning. Purely instinctive thought processes, by contrast, are those that lack metacognition but are still experienced.

Now, because the laws of nature are stable and predictable, analytic idealism posits that the transpersonal mentation underlying the inanimate universe is instinctive, not metacognitive. After all, instinctive behavior is regular and predictable, just like the laws of nature seem to be. As such, universal consciousness does not necessarily have a plan; it may be doing what it is doing merely because it has the innate, instinctive disposition to do so.

It’s fair to place analytic idealism in the historical context of German idealism even though it does not endorse the view that universal consciousness is rational and deliberate. Its ideas are very well aligned with those of Arthur Schopenhauer (1969), as discussed in his magnum opus, *The World as Will and Representation*. Just as Schopenhauer thought that underlying all nature is a “blind will” that presents itself on the screen of perception as matter, analytic idealism maintains that instinctive mental processes—most likely along the lines of desire and fear, as the universe’s movements and evolution suggest some form of basic volitional impetus—underlie physicality.

With Schopenhauer but departing from Immanuel Kant, analytic idealism posits that we can make sound inferences about the nature of the *noumena*—that is, the world as it is in itself—through personal *introspection*; unless we are prepared to accept an arbitrary discontinuity in nature, if my inner mentation presents itself to outside observation in the form of the matter constituting my nervous system, then the matter of the rest of the universe, too, should be the extrinsic appearance of (universal) conscious inner life. As Schopenhauer put it, “We must learn to understand nature from ourselves, not ourselves from nature.”

It is important to emphasize that analytic idealism—unlike panpsychism—does *not* regard experiential properties as properties *of* matter (the latter also having other properties). Instead, what we call matter is merely the *extrinsic appearance* of inner experience as observed from across a dissociative boundary. There’s nothing more to it. To say the same thing in a different

way, “matter” is merely the handy label we give to the contents of a particular modality of experience: perception. Therefore, and paraphrasing Bishop Berkeley, as far as matter is concerned, to be is indeed to be perceived even though the mental activity underlying matter continues to exist whether it is observed from the outside or not—that is, regardless of whether it is apprehended as matter.

With Kant and Schopenhauer, analytic idealism considers the contents of perception mere representations or “phenomena” of the world as it is in itself. What I have been calling extrinsic appearances are thus at least largely equivalent to Schopenhauer’s “representations” and Kant’s “phenomena.” I maintain that these “representations” or “phenomena” arise from the interaction between our own private, dissociated mentation and the transpersonal mentation constituting the environment that surrounds us; in modern language, they arise from observation or measurement.

In positing that “representations” or “phenomena” are what conscious inner life looks like from across a dissociative boundary, analytic idealism adds to Kant’s and Schopenhauer’s insights: neither seems to have explained precisely how “representations” or “phenomena” arise from “will” or “noumena,” respectively.

According to analytic idealism, the outside world we all inhabit—as it is in itself—is not constituted by the qualities of perception; that is, it isn’t physical (what we ordinarily call “physical” is what we see, hear, touch, and so on in contrast to, for example, thoughts and emotions). Running the risk of excessive anthropomorphization—which Schopenhauer himself guarded against—we could think of it as transpersonal thoughts driven by instinctive volitional urges. These transpersonal thoughts merely *present* themselves to us, *at a glance*, as a tapestry of color, flavor, smell, and so on, because *encoding* our apprehension of the surrounding environment in this manner has led to significant survival advantages.

The notion that spatially unbound, universal phenomenal consciousness is the ground of existence circumvents all the insoluble problems of mainstream physicalism and constitutive panpsychism. The core of the hard problem of consciousness, for instance, is this: first, we infer that the world is made of matter outside and independent of consciousness; then we imagine that certain patterns of organization of matter—such as our brain—can, somehow, give rise to consciousness; finally, we infer that the material dynamisms of the external environment modulate the experiences generated by our brain through the mediation of the sense organs. The latter is what we call perception.

The problem is that there is nothing about the abstract, quantitative parameters that describe and define material organization in terms of which we could deduce the qualities of experience. We can exhaustively describe

the material system we call an “apple” in terms of its constituent particle masses, momenta, charges, spatiotemporal positions, and so on, but none of that would give us any insight into what it *feels* like to see the redness or taste the sweetness of the apple. We fundamentally can’t bridge the gap between physical quantities out there and experiential qualities in here.

Under analytic idealism, however, what is out there is *experiences too*, even though these are experiences qualitatively different from those on the screen of perception. In other words, what it feels like to *be* the world out there is qualitatively different from what it feels like to *perceive* that world. But bridging the gap between two different sets of qualities is empirically trivial: we witness it happening all the time. For instance, the qualities of our thoughts can translate directly into the qualities of our emotions: there is something it feels like to have the thought that, say, life has no meaning, which then translates into the felt emotion of hopelessness or despair. The quality of the thought, although different from the quality of the emotion, directly leads to the latter. Therefore, there is nothing difficult about the hypothesis that transpersonal thoughts out there, on impinging on the dissociative boundary of our respective alter—whose representation is our skin and other sense organs—translate into the qualities of perception. There is no unbridgeable gap anymore.

The equally insoluble subject combination problem of constitutive panpsychism (Chalmers, 2016) is also circumvented by analytic idealism. There is no need to explain how fundamentally disjoint, microscopic subjects of experience—such as those hypothetically corresponding to the subatomic particles that form our brain—combine to constitute the seemingly unitary, macroscopic subject we seem to be. Analytic idealism already starts from a universal subject, so nothing needs to combine. The challenge it must then tackle is precisely the opposite: How does one universal consciousness seemingly divide itself up into multiple individual subjects, such as you and me?

While this is a legitimate problem, it is one whose solution nature has already given us in the form of the psychiatric condition called dissociation. Whether we understand the inner mechanisms of the condition or not, we know empirically that mental space can seemingly split itself up into multiple, cognitively disjoint, co-conscious centers of awareness. I insist on “seemingly” because we also know, empirically, that such splits are reversible and merely apparent: patients have been known to overcome dissociation and reintegrate their alters into a unitary, internally connected mental space. The suggestion here is that universal consciousness can undergo something akin to dissociation, thereby forming multiple disjoint alters, such as you and me. What we call life or biology is the extrinsic appearance, the *representation* of

this dissociation; that is, life is what a dissociative process in universal consciousness *looks like* when observed from across its dissociative boundary.

ANALYTIC IDEALISM AND EXPANSIONS OF CONSCIOUSNESS

According to analytic idealism, *normal* brain function is part of the extrinsic appearance of *dissociation*. Therefore, there must be types of brain function *impairment* that represent a *disruption* of the dissociative boundary—making it more “porous”—and, therefore, correlate with an *expansion* of consciousness.

Granted, most forms of brain function impairment correlate with cognitive deficit, for they affect the *contents* of the alter’s consciousness, not the dissociative boundary itself. But if analytic idealism is correct, then at least *some* forms of impairment should disrupt the dissociative boundary and correlate with an enrichment of consciousness or cognitive skill (even if the transpersonal experiential states beyond the dissociative boundary of the alter are purely instinctive, they can still be qualitatively rich and even be brought under the light of metacognition through later recall of the original experience). If it can be shown that such is indeed the case, the implications are significant.

As it turns out, there are many reliable reports in the medical literature of bullet wounds to the head, stroke, concussion, meningitis, and even the progression of dementia leading to expanded cognitive and artistic skills (Lythgoe, Pollak, Kalmus, de Haan, & Chong, 2005; Miller, Boone, Cummings, Read, & Mishkin, 2000; Miller et al., 1998; Piore, 2013; Treffert, 2006, 2009). This is called “acquired savant syndrome,” and it’s just the tip of the iceberg. Many forms of brain function impairment associated with seeming unconsciousness are now known to be accompanied by richer conscious inner life. For instance, the dangerous choking game played by teenagers worldwide (Macnab, Deevska, Gagnon, Cannon, & Andrew, 2009) is an attempt to induce rich feelings of self-transcendence through partial strangulation and fainting (Neal, 2008, pp. 310–315). The psychotherapeutic technique of holotropic breathwork (Rhinewine & Williams, 2007) also uses hyperventilation-induced fainting to achieve what is described as an expansion of awareness (Taylor, 1994). Even pilots undergoing G-force induced loss of consciousness (G-LOC)—whereby blood is forced out of the brain—report “memorable dreams” (Whinnery & Whinnery, 1990).

Most relevant and remarkable of all, generalized physiological stress or even the cessation of key bodily functions caused, for instance, by cardiac arrest—which severely compromises brain function—is sometimes accompanied by reports of near-death experiences (NDEs) (van Lommel, van

Wees, Meyers, & Elfferich, 2001; Greyson, Chapter 1 in this volume). NDEs reportedly entail life-transforming insights, emotions, and inner imagery far richer than ordinary experiences (Kelly et al., 2007, pp. 367–421) despite overwhelming disruption to the brain's ability to operate.

This pattern of correlations between brain function *impairment* and a seeming *expansion* of awareness is surprisingly broad. For instance, during the practice of so-called psychography, a medium enters a trance state and writes down information allegedly originating from a transcendent source. A detailed neuroimaging study revealed that experienced mediums displayed marked *reduction* of activity in key brain regions—such as the frontal lobes and hippocampus—when compared to regular, non-trance writing (Peres, Moreira-Almeida, Caixeta, Leao, & Newberg, 2012). Despite this, text written under trance scored consistently higher in a measure of complexity than material produced without trance.

Even more intriguingly, it is well known that psychedelic substances induce powerful experiences of self-transcendence and overwhelmingly richer conscious inner life (Griffiths, Richards, McCann, & Jesse, 2006; Strassman, 2001; Strassman, Wojtowicz, Luna, & Frecska, 2008). It had been assumed that they did so by exciting parts of the brain. Yet recent neuroimaging studies have shown that psychedelics do largely the opposite (Carhart-Harris et al., 2012, 2016; Lewis et al., 2017; Palhano-Fontes et al., 2015). Moreover, “the magnitude of this decrease [in brain activity] predicted the intensity of the subjective effects” (Carhart-Harris et al., 2012, p. 2138). In other words, the *less activated* the brain becomes, the *more intense* the psychedelic experience.

If this pattern is consistent, we should expect even some types of physical brain damage to also lead to experiences of self-transcendence. And indeed, this has been reported. In one study, computed tomography scans of more than one hundred Vietnam war veterans showed that damage to the frontal and parietal lobes increased the likelihood of their reporting “mystical experiences” (Cristofori et al., 2016). In an earlier study, patients were evaluated before and after brain surgery for the removal of tumors, which caused collateral damage to surrounding tissue. Statistically significant increases in “feelings of self-transcendence” were reported after the surgery (Urgesi, Aglioti, Skrap, & Fabbro, 2010).

Clearly, there is a broad and consistent pattern associating impairment of brain function with unexpected scientific, artistic, and spiritual insight. That this happens in but a small minority of cases isn't surprising: damage affecting memory pathways, metacognition, language centers, or any other cognitive function necessary for recalling or reporting inner life erases the signs of such insights. A person lying in a vegetative state could be having

indescribably rich inner experiences, and we would be none the wiser. The evidence is necessarily confined to a narrow window between brain function impairment insufficient to trigger self-transcendence and impairment that renders self-transcendence unreportable to self and others.

It is conceivable that brain function impairment could disproportionately affect inhibitory neural processes, thereby generating or bringing into awareness other neural processes associated with self-transcendence. However, if experience is constituted, generated, or at least fully modulated by brain activity, then an increase in the richness of experience must be accompanied by an increase in the metabolism associated with the neural correlates of experience. Any other alternative would decouple experience from the workings of the living brain information-wise (Kastrup, 2019). As such, it is difficult to see how partial strangulation, hyperventilation, G-LOC, cardiac arrest, and so on—which reduce oxygen supply to the brain *as a whole*—could *selectively* affect inhibitory neural processes while preserving enough oxygen supply to fuel an *increase* in the neural correlates of experience.

Alternatively, one could speculate that experiences of self-transcendence occur only after normal brain function resumes. This, however, cannot account for several of the cases discussed earlier. For instance, during the neuroimaging studies of the psychedelic state, researchers collected subjective reports of self-transcendence while *concurrently* monitoring the subjects' reduced brain activity levels. The same holds for the neuroimaging study of psychography. Finally, in cases of acquired savant syndrome, the savant skills are often concomitant with the presence of physical damage in the brain.

It is conceivable that individual cases of self-transcendence could have their own idiosyncratic explanation, unrelated to the other cases, and that the overall pattern suggested here is a red herring. However, the cases mentioned previously, besides being associated with brain function impairment, also share strikingly consistent phenomenology reports. Consider the two passages quoted below:

I certainly don't feel reduced or smaller in any way. On the contrary, I haven't ever been this huge, this powerful, or this all-encompassing . . . [I] felt greater and more intense and expansive than my physical being. (Moorjani, 2012, p. 69)

My perception of my physical boundaries was no longer limited to where my skin met air. I felt like a genie liberated from its bottle. The energy of my spirit seemed to flow like a great whale gliding through a sea of silent euphoria. (Taylor, 2009, p. 67)

The first passage was reported by the subject of an NDE caused by generalized physiological stress, while the second was reported by the subject of a stroke.

Such similarities suggest—consistent with analytic idealism—that normal brain function corresponds to a confining dissociation from a *transpersonal* consciousness and that certain forms of impairment of brain function reduce this dissociation and liberate consciousness, thus leading to expanded awareness and self-transcendence.

ANALYTIC IDEALISM AND PSI

Significantly, this also provides a possible metaphysical basis for telepathy and clairvoyance: it is entirely conceivable that some people, due to their particular physiological makeup, are prone to states corresponding to reduced dissociation. In these states, the dissociative boundary may become “porous” or “permeable,” and information from—that is, specific patterns of excitation of—the transpersonal segment of universal consciousness may “percolate through” or be transmitted directly across the boundary, bypassing the sense organs.

It is equally conceivable that even people who aren’t ordinarily prone to such states may—under *extraordinary* circumstances, such as extreme stress—undergo changes in their physiology that also render the dissociative boundary “porous” or “permeable.” Indeed, it is relevant to notice that many preliterate cultures have initiatory rituals whereby individuals are meant to discover great secrets and achieve great insight precisely by undergoing extreme physiological stress, such as exhaustive physical activity, fasting, poisoning, dehydration, overheating, or panic-inducing ceremonies. This is a consistent characteristic of shamanic rituals worldwide. It is conceivable that such rituals, by disrupting a person’s normal physiology, weaken the dissociative boundary and thereby enable transcendent insight (see Kelly & Locke, 1981/2009).

In summary, according to analytic idealism, our normal, ordinary state of consciousness is a bound, dissociated one wherein our mind is seemingly separated from universal consciousness. Under specific physiological conditions, however, the dissociative boundary may become “porous,” “permeable.” *Consciousness may thereby become unbound*, and phenomena such as telepathy and clairvoyance can occur.

It is important that science more thoroughly and systematically investigates consciousness expansion through impairment of ordinary brain function, for this kind of research could help us *induce* phenomena such as telepathy and clairvoyance, which would have untold practical applications. Psychedelic neuroimaging, for instance, is a developing frontier of this kind of research.

It may provide a path to the experimental study of mystical experience and the neurophysiological conditions under which it occurs.

ANALYTIC IDEALISM AND POSTMORTEM SURVIVAL

Mainstream physicalism tells us that because phenomenal consciousness is supposedly generated or even constituted by brain activity, on physical death—when brain activity ceases altogether—consciousness is necessarily lost. What does analytic idealism have to say about this?

Under analytic idealism, as described thus far, the living body—including its brain activity—is but the *representation*, the *extrinsic appearance*, of a dissociative process in universal consciousness as observed from across its dissociative boundary. In a nutshell, life is the image of dissociation. Death—the end of life—is therefore the image of the *end of dissociation*. As the body stops working and eventually is reabsorbed into the inanimate—that is, non-metabolizing—universe, so our previously dissociated alter, along with all its mental contents, is presumably reabsorbed into universal consciousness.

And here we have a hint as to the meaning of life: alters have to struggle so as to survive within a planetary ecosystem. In this struggle, natural selection favors the evolution of alters with higher cognitive skills since these stand a better chance of surviving and reproducing. Such selective pressures are presumably what enabled the development of our unique ability to *metacognize our own mental contents*—that is, to turn our own subjective experiences into objects of cognition, to think about our thoughts and ponder our feelings, and to explicitly recognize ourselves as conscious agents. The transpersonal segment of universal consciousness, however, undergoes no such selective pressures and, as such, presumably lacks the ability to metacognize itself, to self-reflect, to become self-aware.

Life—dissociation—may thus be the way universal consciousness becomes metacognitively aware of itself. But since dissociation works both ways, for as long as we are alive our experiences are largely private to ourselves. It is on death—the end of dissociation—that the metacognitive insights accumulated over a lifetime are released into the broader, transpersonal context of universal consciousness.

The obvious question this line of thought raises is this: Although consciousness always survives—for it is that within which life and death unfold—might our *personal* agency and identity survive? Could Bernardo Kastrup, as an individual with a unique personality, memories, and dispositions, survive the death of his body?

If life—that is, metabolizing biology—is a *complete* image of a dissociative process in universal consciousness, then the answer is no: what defines Bernardo Kastrup as an individual agent is precisely the fact that he is an alter of universal consciousness. If death represents a *complete* unraveling of the alter—the total end of dissociation—then Bernardo Kastrup will cease to be on his bodily death. His memories and insights might survive in a broader field of subjectivity—for the end of dissociation would presumably release his mental contents into the transpersonal segment of universal consciousness—but not Bernardo Kastrup as an individual agent.

In what sense, then, could we say that Bernardo Kastrup's consciousness might survive given that Bernardo Kastrup himself will likely cease to exist? The key to answering this question is to notice that our *felt* self is often in subtle disagreement with our *intellectual conception* of self. Allow me to elaborate.

The felt self is what philosopher Itay Shani (2015) calls “core-subjectivity”: it is “ipseity, or I-ness, by which is meant an implicit sense of self which serves as the dative . . . of experience, namely, as *that to whom things are given*, or disclosed” (p. 426, emphasis in the original). In other words, core-subjectivity is what remains of a person's subjectivity when the person's particular mental *contents* are disregarded. It is pure I-ness, which feels exactly the same in each and every person (arguably even every living creature), for what distinguishes the conscious inner lives of different people is precisely their respective mental *contents*: their particular memories, tastes, dispositions, perceptions, and so on.

For this reason, Schopenhauer described what Shani calls core-subjectivity as “that *one* eye of the world which looks out from *all* knowing creatures” (Schopenhauer, 1969, Vol. 1, p. 198, emphasis added), the “eternal world-eye” (Vol. 2, p. 371). If you and I were to become completely amnesic while lying in an ideal sensory deprivation chamber, for at least a moment all that would be left in our conscious inner lives would be this core-subjectivity, this undifferentiated but felt I-ness, identical in both you and me.

When I say that, under analytic idealism, Bernardo Kastrup's consciousness will survive his bodily death, what I mean is that his *core-subjectivity* will remain untouched. Indeed, his life and death unfold *within* it. Bernardo Kastrup's felt self, his I-ness, *is the core-subjectivity of universal consciousness itself*, for, dissociated or not, Bernardo Kastrup is a “segment” of universal consciousness. And so are you: your core-subjectivity, too, is that of universal consciousness. Ultimately, you and I *are* universal consciousness, even during the dissociation—what else could we be? All existence unfolds *within* this one core-subjectivity, this “one eye of the world,” which happens to take myriad different points of view as a result of dissociation. In the words of

Meister Eckhart in *Sermon IV*, “The eye with which I see God is the same eye with which God sees me. My eye and God’s eye is one eye, and one sight.”

If the above is correct, then we do survive our bodily death in the only way that, in my view, really *matters*: our felt I-ness persists and probably witnesses the whole process of death.

Yet many people seem to identify not with their core-subjectivity but with a rather intellectual *conception* of self associated with a *particular perspective*—one’s everyday perspective—within the activity of universal consciousness. Anchored in that idiosyncratic and ephemeral point of view, they engender a unique *narrative of personal identity*, a story of selfhood they tell themselves and buy into. They see themselves as a particular set of experiences—memories, tastes, dispositions, and so on—instead of the *subjective space* wherein all these experiences unfold.

These people believe that if their *personal* agency unravels, they unravel with it. For them, analytic idealism may be equivalent to mainstream physicalism in the sense that both are interpreted as implying ultimate oblivion. Yet their problem is not one of metaphysics; instead, it is one—in my view—of mistaken identity resulting from a lack of introspective insight and self-knowledge. If dreamers insist on believing that they will face oblivion the moment they wake up from the dream—for their dream avatar certainly loses its personal agency when the dream ends, shifting its identity to the broader field of mentation wherein the dream *as a whole* was taking place—theory cannot help them.

Of course, ultimately it all comes down to evidence, not theory. If there are strong enough indications that personal agency does persist—in some form—after bodily death, then theory must follow the evidence, not the other way around. In this context, I offer the following considerations.

First, analytic idealism can be made consistent with some form of personal postmortem survival: if biology is an *incomplete* image of dissociation, then the end of life doesn’t necessarily imply the total end of the dissociation. It is conceivable that a biological organism is the extrinsic appearance of merely *a part* of the corresponding alter so that another, hidden part of the alter persists after death. The question is whether we have persuasive reasons—theoretical or empirical—to take this hypothesis seriously.

Second, the question of personal postmortem survival is intimately tied to the nature of time. The status of time in physics today is quite unclear: some physicists maintain that time doesn’t even exist, others that time is the only dimension that actually exists, while yet others maintain that time exists but isn’t fundamental, emerging instead from microscopic quantum processes. Once the objective existence of irreducible linear time is called into question, all bets are off regarding the existential status of personal

agency *after* death, for this very “after” may be a relative or even illusory notion. It is conceivable that, under certain understandings of the nature of time, if something *once* existed, then there is an important sense in which it cannot cease to exist.

Third, notice that, under analytic idealism, even if we don’t survive as personal agents, the *contents of our personal consciousness*—all the knowledge, dispositions, and even personality traits we’ve developed and accumulated during life—are presumably released into the transpersonal segment of universal consciousness on our bodily death (whether they can maintain their integrity thereafter is another, unclear matter). It is conceivable that trance mediums might pick up that information—through their own relatively porous dissociative boundary—from the ocean of universal consciousness surrounding them, not from enduring individual minds in an afterlife.

Finally, sometimes what is described as contact with a deceased person—be it through a medium or directly, such as during an NDE—may turn out to be more consistent with a different interpretation when looked at more closely. Take, for instance, Anita Moorjani’s NDE, which is well known for having involved an encounter with her previously deceased father. In an interview given to Renate McNay of conscious.tv, Moorjani said, “I encountered my father . . . it was as though *I became his essence*; I understood him” (emphasis added). The notion that she and her father “became” one another seems consistent not with personal postmortem survival but instead with the idea of unraveled dissociation as posited by analytic idealism.

To me at least, it is not important whether our personal agency survives bodily death. What really matters is that our core-subjectivity does, for the latter is our true self.

CONCLUSIONS

Both our current mainstream metaphysics—physicalism—and its currently most discussed alternative—constitutive panpsychism—are plagued by insoluble problems and are bound to eventually be discarded. Although mainstream physicalism has built tremendous momentum over the decades by pretentiously attaching itself to science and technology, no metaphysics that fails to account for the most obvious and sole undeniable fact of existence—our personal consciousness—can survive in the long run.

Analytic idealism is a promising long-term alternative in that it circumvents the insoluble problems of both mainstream physicalism and constitutive panpsychism. It is also a more logically consistent, conceptually parsimonious, and empirically adequate metaphysics. It posits that we—living

beings—are all dissociated alters of the one universal consciousness at the irreducible foundation of existence. There is an important sense in which our own core-subjectivity or felt sense of I-ness *is* universal consciousness. The inanimate universe we perceive around us is the extrinsic appearance—the *representation* in Schopenhauer’s sense—of *transpersonal* experiential states in which we are immersed.

Although analytic idealism does not close the door on personal postmortem survival, its more cautious interpretations imply that only our core-subjectivity survives bodily death, whereas the contents of consciousness we’ve accumulated throughout life are released into the broader experiential field of the transpersonal segment of universal consciousness. Among these released contents are insights achieved during life by virtue of our uniquely human conscious metacognition, which may allow universal consciousness itself to slowly become more self-aware.

Unlike mainstream physicalism and constitutive panpsychism, analytic idealism elegantly accommodates psi phenomena: when the dissociative boundary of an alter—that is, a living being—becomes “porous” or “permeable” due to impaired or reorganized brain function, information about the transpersonal experiential states that surround us can percolate through the boundary in a way that bypasses the sense organs. This partial unbounding of consciousness can account for phenomena such as telepathy, clairvoyance, genius, mystical insights, and so on.

The most scientifically relevant implication of analytic idealism is the prediction that *certain* impairments of ordinary brain function allow for an expanded form of awareness conducive not only to insight into the nature of self and existence but also to the development of practically applicable skills such as telepathy, clairvoyance, and genius. There are many empirical reports of consciousness expansion correlating with brain function impairment but too few prospective, systematic studies exploring this phenomenon. With modern, safe ways to impair ordinary brain function temporarily and reversibly—such as psychedelic drugs and transcranial magnetic stimulation—it is becoming possible to carry out more such studies.

Analytic idealism thus opens up new horizons for scientific research. It also opens up new horizons regarding the meaning of life, our relationship with the world and each other, and our expectations regarding the postmortem state. Mainstream physicalism has served its purpose, and constitutive panpsychism has already helped our intellectual establishment become used to the notion that consciousness may be irreducible. Now it’s time we took a more significant step toward a more defensible metaphysics that can better inform our ways of both living and dying. It’s time we moved on to a worldview that promises—quite literally—*consciousness unbound*.

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CONSCIOUSNESS COMES FIRST

Federico Faggin

Why then will you not admit the universe to be a conscious intelligence since conscious intelligences are born from it?

—Cicero, *De Natura Deorum*¹

My interest in consciousness was sparked in 1987 when I was studying neuroscience as background material for the research-and-development work on artificial neural networks that I was conducting at Synaptics Inc. As co-founder and chief executive officer of that Silicon Valley company, I wanted to develop silicon chips that could *emulate* neural networks, thus creating the basic building blocks for cognitive computers.

All the neuroscience books I was reading were describing brain operation in terms of electrochemical activity as if that movement of molecules and signaling were identical to sentient perception. Surprisingly, the word “consciousness” was never mentioned, and I was asking myself, “How can electrical and biochemical signals become sensations and feelings? Clearly the two cannot possibly be the same thing.”

For example, let’s consider how a rose is recognized by its smell: the specific mix of odoriferous molecules emitted by the rose produces tiny electrical signals in the olfactory cells in the nasal epithelium. These signals are sent to the neural networks of the olfactory cortex, whose output signals correspond to the *name* of the identified object: “rose” in this case. By imitating the same process, a machine can also recognize a rose by its “smell.” However, a machine does not “feel” anything, while we not only recognize the rose but also *feel* its scent.

The scent is something completely different from the electrical signals produced by the neural networks. It is related to them, of course, but it is not

identical, nor can it be produced directly from them since it is a completely different *quality* than electrical or mechanical activity. The scent is a *feeling* that makes electrical signals conscious: we “know” the rose exists because we “feel” its scent in our awareness. Consciousness is then what translates physical data into qualia that can be perceived and comprehended.

The computer can neither be aware nor consciously know anything. It can only translate the complex pattern of electrical signals generated by the sensors of the odor molecules into another electrical signal: the name “rose.” The *comprehension* brought by consciousness is not accessible to a computer. And herein lie the crucial limitations of artificial intelligence.

Science cannot explain why we have feelings. Based on science, consciousness should not exist either in computers or in humans.

AWAKENING

During the time I was struggling to understand how to make a conscious computer, I also found myself in a deep existential crisis. I had achieved everything that common wisdom says should make me happy, and I was beset with a deep dissatisfaction. I had reached a stage of quiet desperation. I was wondering, “What do I live for?” And, at the same time, I felt compelled to maintain a facade given my responsibilities as husband, father, and head of a promising company. But I almost felt dead inside.

I realized that I was preventing myself from experiencing my despair. I lived hiding in an artificial cocoon that I had constructed to protect myself from feeling my deepest and most genuine feelings. I only *imitated* being happy.

I asked for help. I prayed, not verbally and not even consciously, searching for an answer to my fundamental questions: “What is the meaning of *my* life?” and “Is death really the end of everything?”

In December 1990, while I was with my family at Lake Tahoe during the Christmas holidays, I woke up around midnight to drink a glass of water. When I went back to bed, while waiting in silence to fall asleep again, I felt a powerful rush of energy-love emerge from my chest, the likes of which I had never felt before and couldn’t even imagine possible.

This feeling was clearly love, but a love so intense and so incredibly fulfilling that it surpassed any possible idea I had about what love is. Even more unbelievable was the fact that *I was the source* of this love. I perceived it as a broad beam of shimmering white light, alive and beatific, gushing from my heart with incredible strength.

Then suddenly that light exploded and filled the room and then expanded to embrace the entire universe with the same white brilliance. I *knew* then, without a shadow of a doubt, that this was the “substance” of which all that

exists is made. This was what created the universe *out of itself*. Then, with immense surprise, I knew that I was that light!

The entire experience lasted perhaps less than one minute, and it changed me forever.

My relationship with the world had always been as a separate observer perceiving the world as outside of me and separate from me. What made this experience astonishing was its “impossible” perspective, because I was *both* the experiencer and the experience.

For the first time in my life, I was simultaneously the world and the observer of the world. I was the world observing itself! And I was concurrently *knowing* that the world is made of a substance that feels like love. And that I am that substance!

In other words, the essence of reality is a substance that knows itself by self-reflection, and its self-knowing feels like an irrepressible and dynamic love.

This experience contained an unprecedented force of truth because it felt true at all the levels of my being: at the physical level, my body was alive and vibrant like I never felt it before; at the emotional level, I experienced myself as an impossibly powerful source of love; and at the mental level, I knew with certainty and for the first time that all is “made of” love. That experience also revealed the existence of another level of reality never before experienced: the spiritual level, in which I felt one with the world.

This was *direct knowing*, stronger than the certainty that human logic provides—a knowing *from the inside* rather than from the outside, one that involved for the first time the concurrent *resonance* of all my conscious aspects: the physical, emotional, mental, and spiritual. I like to think that I have experienced my own nature both as a “particle” and as a “wave,” to use an analogy with quantum physics impossible to comprehend with our ordinary logical mind.

The particle aspect was the ability to maintain my unique identity despite being also the world, which was the wave aspect. Thus, my identity is that unique point of view with which One—All that is, the totality of what exists—observes and knows itself. I am a point of view of One.

This experience maintained its original intensity and clarity over time, and it changed my life *from the inside out*, continuing to have a powerful impact to this day.

EXPLORATION

After the awakening experience, I started reading books like the *Tao Te Ching* and the *Bhagavad Gita*. These ancient texts were reflecting and enriching the understanding of my own awakening, revealing that since time immemorial,

humans' personal journeys had been illuminated by experiences like mine. Prior to my awakening, those books would have only fed a superficial literary interest since "soul" had little real meaning to me. Afterward, *soul* meant that alive, scintillating, loving, and self-knowing substance of which everything is made: it became a *lived experience* rather than an intellectual idea.

That awakening also opened the door to a stream of other spontaneous and extraordinary experiences of consciousness that have continued to this day. They included vivid dreams, deep intuitions, expansions of consciousness, out-of-body experiences, and other states of consciousness that greatly expanded my previously limited concepts about reality, constrained by preconceived ideas.

A little at a time, I began to realize that the truly important journey is the inner one. And with the same dedication I had showered on my technological and scientific research, I committed to discovering the truth about myself beyond the perceptual distortions fostered by prejudices. I had the opportunity to see how deep my "rabbit hole" was and how much my life had been conditioned by false beliefs and ideas. These experiences also made me relive many emotions and events I had repressed and forgotten.

I realized that I had almost always repressed my true feelings. I had denied the pain and hid the truth about what I felt to protect myself. I had worn the mask of one who is ready to joke about everything, letting the hurts slide off me with a laugh and a pun. In this way, I had convinced myself that I was strong, when all I did was estrange myself from my own heart by pretending that everything was fine.

After twenty years during which I spent 30–40 percent of my time doing personal work, I began to take seriously the idea that consciousness could be a fundamental aspect of nature already present in some fashion in the atoms and molecules of which everything is made. This idea emerged gradually due to the impossibility of explaining how consciousness could arise from the material complexity of our brain. I kept thinking, "How can a physical inert structure that possesses only outer aspects give rise to inner experiences?" The concept of complexity has nothing to do with the sensations and feelings that populate our inner world. In fact, today's computers, which are very complex, do not have a shred of consciousness.

There was no logical alternative: the inner world of meaning must also be an *irreducible* property of all that exists from the very beginning. *Meaning* and *matter* must be like the two faces of the same coin.

This topic fascinated me because it had the potential to explain and unify the existence of the outer and inner realities that I had been experientially exploring for twenty years. Science and spirituality, until now irreconcilable, could find a deep union rather than a simple juxtaposition of convenience. So,

I decided to withdraw completely from all my other activities and focus on developing a model of reality based on the assumption that consciousness is fundamental rather than deriving from matter.

The model I will describe is based on *quantum field theory* (QFT)—the most accurate model of reality we currently have—adding to it the idea that consciousness exists before the Big Bang, which is considered the beginning of our universe.

REVISITING THE FUNDAMENTAL HYPOTHESES

Classical Physics

Starting in the seventeenth century, the scientific method has given us the best answers about the nature of reality, achieving a level of consensus never dreamed of by philosophers or theologians. Classical physics, together with mathematics, slowly built a solid foundation on the basis of reasonable postulates and logical proof of theorems, corroborated by the experimental verification or falsification of the predictions made by the mathematical models.

By the end of the nineteenth century, the conceptual framework formulated by physics to describe the inanimate world seemed to be infallible in its predictions. However, there were some *anomalies* that appeared unimportant.

It took a quarter of a century to explain these “little” anomalies, but doing so required the overturning of almost all the fundamental assumptions of classical physics! This process gave birth to *quantum mechanics* and *general relativity*: new physics that replaced the deterministic and reductionistic world of classical physics with the *uncertainty* and the *holism* of the new framework.

Within classical physics, the elementary particles were conceived like the original atoms of Democritus: very small, irreducible, bounded, indestructible, and separate from each other. In this vision, free will could not exist. There was only one objective reality, the same for everyone, because reality was completely determined by the mechanical interaction of these atoms obeying immutable and deterministic laws.

According to this model, the strict laws that specify the behavior of the particles also determine how we act *regardless* of what we think or feel. We are simply *mechanisms* mistakenly believing that we have real feelings and free will. In the world of classical physics, there is no free will at any level. We are a small gear made of even smaller gears inside a giant clockwork run by immutable laws. In short, although we may think we make free decisions, we are instead completely controlled by the impersonal laws governing the

behavior of the atoms and molecules of which we are made, the same atoms that “make us think” we made a free decision.

Everything Is Made of Fields

The idea of *field* is one of the most fertile ideas in physics. It was introduced by the genius of Michael Faraday in 1831 to explain puzzling electromagnetic phenomena. Forty years later, James Clerk Maxwell generalized Faraday’s magnetic field idea to the electric field with the first mathematical treatment of the electromagnetic field. This seminal theory surprised the scientific world with the prediction of *electromagnetic waves*.

To imagine the electromagnetic field, think about the entire three-dimensional space of the universe filled by an invisible and immaterial “substance” in which ripples or waves can form and propagate. These waves are everywhere and are what we perceive as light. They are also what we use to cook our food in a microwave oven and what allows us to communicate wirelessly.

The next major revolution in physics started in 1900 with the discovery by Max Planck that the transfer of energy is not continuous but occurs in discrete lumps, or *quanta*. This radical idea led to quantum mechanics in the mid-1920s and to QFT in the 1950s. It eventually became the Standard Model of physics in the 1970s by generalizing the idea of field. Based on QFT, there are seventeen quantum fields in superposition in spacetime. These fields are not continuous, like Maxwell’s field, but quantized, meaning that the interactions between fields occur in lumps.

According to QFT, each elementary particle does not even exist as an independent and separate entity but is in fact an *excited state* of a quantum field. In other words, the ontological primitive is no longer the particle but the field. Matter is a property of fields and doesn’t exist as we once thought. A particle *is not an object*. It is just an *informational state* of a field. Within QFT, all the electrons of our body together with all the electrons in the rest of the universe are “quantized waves” (states) of the same underlying field.

A crucial aspect of QFT is its probabilistic nature, meaning that its equations can predict only the probability of observable events, not which specific event will happen. The lack of determinism makes QFT *compatible* with free will, even though most physicists do not claim that free will exists.

According to QFT, elementary particles, atoms, molecules, proteins, living cells, organs, and animals constitute ever-growing hierarchical levels of *organizations of states* belonging to the quantum fields. These fields have space and time in common and are the fundamental entities that, interacting with each other, create all that physically exists.

The Universe Is Dynamic and Holistic

QFT postulates the perennial probabilistic creation and annihilation of elementary particles from the quantum vacuum and, in conjunction with Einstein's general relativity, describes a universe that started with a "fluctuation" of the quantum vacuum from which spacetime and the quantum fields emerged in an explosive expansion. This theory—known as the Big Bang—describes the evolution of the universe, starting from a "singularity" of almost infinite density and temperature that expanded to achieve the universe we observe today, 13.8 billion years later.

QFT and general relativity clearly show the *irreducible dynamism* we observe in the universe at both small and large scales. That same dynamism exists also in our inner worlds as our sensations, emotions, and thoughts constantly change.

The universe is not only an irreducibly dynamic system, however. It is also an *indivisible whole*—that is, a *holistic* system.

Imagine an infinite "ocean" in which forms keep on emerging, changing, and disappearing without leaving a trace. This would be a holistic system in which no identification of any part would be possible. The universe described by QFT is less general because it consists of many fields in superpositions in which each field produces *states that can be identified* because they always have the same properties—for example, "electrons" or "up quarks."

However, the fields are *inseparable* from each other and therefore cannot be called parts. I will call a field a *part-whole* to distinguish it from the separable parts of classical physics. A part-whole must emerge from the whole, and thus it must share all the key properties of the whole *and* simultaneously must have a unique *identity*, a permanent individual property that distinguishes it from all the others. A part-whole is not like the parts of a machine enclosed by boundaries that can be taken apart.

The persistent identity of a field manifests in the *indistinguishability* of its quanta. Think of the electron, for example, as what gives a unique identity to the field. The electron is like a unique symbol with which the field communicates with other fields and is recognized by them.

The states of the fields, in addition to combining from the bottom up into hierarchies of states, can also be influenced by the whole, top down. This whole-to-part feedback is represented by *quantum entanglement*, a remarkable property in which interacting fields create states (what we think of as particles) with joint *nonlocal* properties that are independent of space and time. This means that when two entangled particles are separated by vast distances, the measurement of the state of one particle will instantaneously determine the entangled state of the other particle.

Another general feature of our holistic universe is that the states of the quantum fields self-organize hierarchically to create complex systems like living organisms and the ecosystem of our planet. Out of this process, subatomic particles, atoms, molecules, cells, organs, organisms, and so on emerge. These are ever more complex *hierarchies of connections* between groups of states within the quantum fields.

Notice that ontology resides only in the quantum fields because the “stuff” of which all hierarchical levels are composed is ultimately the stuff that makes such fields. What we conceive as “atoms” and “molecules” exist only as particular combinations of *connections* (or *relationships*) among the dynamical states existing within the fields of the elementary particles.

Conscious Entities Communicating

Let’s imagine a large town square where there are hundreds of people, animals, and objects emitting vibrations that are perceivable as sounds. Each entity contributes a small amount of vibrations to the overall vibrations of the square. The vibrations propagate everywhere and are superimposed at each point in the space of the square. Each conscious entity can choose to pay attention only to a small fraction of these vibrations, and the selected ones constitute an *observation* that is *experienced* as sound sensations and *comprehended* to some extent. The entity, then, may *respond* to its inner experience by outputting new vibrations that are added to the others.

If we now consider only the conscious entities, the outer vibrational reality in the square is the sum of the vibrations produced by all those entities. The inner semantic reality of each entity is thus affected by the entity’s decisions as to which subset of vibrations to observe and experience. Then, in response to its inner experience, the entity may make a free-will decision of which meaning it wants to communicate next, outputting new vibrations that symbolically represent the intended meaning, thus affecting the outer vibrational reality once more. In general, each entity constantly repeats cycles of observation (qualia), experience (comprehension), and response (action).

In this example, we see clearly that the outer reality affects the inner reality and that the inner reality affects the outer reality. There is symmetry. We also see that the vibrations emitted in response to the entity’s inner experience represent a *top-down influence* on physical reality because they affect the motion of the air molecules, contrary to the worldview of classical physics in which only bottom-up influences and no free will exist.

I should stress here that when I say “inner reality,” I do not mean the *physical* reality inside the body—that is, the atoms and molecules of which the body is made. That physical reality is still part of the outer reality even though it is not visible from the outside. Inner reality means instead *what we feel*: the qualia

that constitute our conscious inner experience, in addition to the capacity to communicate with free will to other conscious entities by shaping symbols.

In other words, my conscious choice of what *meaning* I wish to communicate is not made by the atoms of my body, even though my conscious experience leading to that choice was affected to some extent by the physical configuration of my body's atoms. Once my choice has been made, my conscious command will affect a subset of the atoms of my body. These in turn will affect my physical behavior in such a way that the sound I emit will represent the meaning I wish to communicate. Said differently, the sound pattern has both a *symbolic* (air vibrations) and a *semantic* (qualia, meaning) content belonging, respectively, to the outer and the inner realities. And there must be a *two-way communication* between the inner semantic and the outer symbolic levels.

Let's now return to the square full of conscious entities producing vibrations. At any one time, each entity observes only a small subset of the overall vibrations, neglecting the rest of them, which are considered "background noise." For example, my experience will be quite different from that of my neighbor, who is listening to a different person than I am, not to mention the experience of the dog nearby, which pays attention only to the barking vibrations of other dogs and considers human voices background noise. If I were interested only in the conversation with my interlocutor, the barking of the dogs, the conversations of other people, and all the other "potentially meaningful sounds" would all be part of my background noise.

Notice that in the sound reality of the square, there are neither *objective symbols* nor *objective noises*. What is signal and what is noise are determined by the free-will choices of each entity (observer). Furthermore, since each observer has ordinarily only a single point of view, no entity can simultaneously experience the vibrational reality of the square from two or more points of view.

We could now generalize this example to the electromagnetic field created and observed by the particles, atoms, molecules, macromolecules, cells, organs, ants, dogs, and men, each contributing to creating the same vast electromagnetic field and each observing only an infinitesimally small portion of it. If we considered electromagnetic vibrations rather than sound vibrations, we would indeed be closer to what's happening in our world. However, the narrative would be much more complicated, though it would not add much to the basic conceptual ideas contained in the simpler example with sound.

A Quantum Physics Interpretation

Within classical physics, *everything* is outer reality because the properties of the elementary particles are the only determinants of the properties of any

hierarchical structure made of them. Therefore, the inner reality cannot exist in any organization of classical particles.

Within quantum physics, however, there is the possibility that each hierarchical level might have some degree of freedom not entirely accounted for by the behaviors of the hierarchical level immediately below it. For example, the properties of a water molecule are more than the sum of the properties of the hydrogen and oxygen atoms. A water molecule has new properties that involve some kind of *integration* of lower-level properties into something new (not a sum), with new freedoms accessible to the whole that are not available to the parts.

Furthermore, whereas classical physics allows an observation to be made without affecting what is observed, with quantum physics it is impossible to observe without disturbing what is observed. Therefore, if we imagine that consciousness and free will were holistic inner properties of each quantum field, then the outer physical states of the field could be changed from within itself, and the outer reality would then be the dynamical result of the interplay of the inner semantic and the outer symbolic realities of all the interacting entities.

Those outer states would then resemble the vibrations imposed by a conscious entity on the air molecules in the square example previously described. As such, the states would have to obey probabilistic physical laws since their structure would carry a freely chosen meaning encoded onto them.

The reality made of interacting conscious entities, impossible within classical physics, may, however, be compatible with quantum physics *if we grant to the quantum fields the capacity to be conscious and to act with free will*. This is my fundamental hypothesis, which attributes to the quantum fields new properties unacknowledged by physics. In this view, we may *interpret* the appearance of an elementary particle at a specific location in spacetime as a communication symbol, and we may interpret quantum entanglement as evidence that the entangled particle is a part of a larger organization. The quantum state of a quantum system may then be interpreted as having a dual nature: to the outside world, it is a *quantum symbol* and to the conscious entity it is a *meaning*. The appearance of specific organizations of quantum states must then be probabilistic to ensure that a free-will decision has been made to communicate the symbol represented by that organization of states.

The theoretical physicist Giacomo Mauro D'Ariano (personal communication) thinks that free will can be explained by a quantum theory of consciousness. He says, "It is a theorem of quantum theory that quantum randomness cannot be interpreted as 'lack of knowledge of a pre-existent local reality.'" The consequences of this theorem are, in his words, that "quantum randomness is an act of creation," and "free will is compatible with a theoretical description as a 'quantum outcome.'"²

The only additional assumption needed for quantum physics to explain the existence of conscious entities is to hypothesize that the quantum state of a field has a meaning to the field itself. That meaning can be communicated with symbols made by organizations of states that can be perceived and comprehended by other quantum fields, as I will next attempt to explain. If this conjecture can be proven, QFT may be sufficient to explain the nature of consciousness. Otherwise, we may have to develop a new theory that is more general than QFT, as long as it contains QFT as a special case when certain restrictive conditions are met.

A NEW CONCEPTUAL FRAMEWORK

One and the Consciousness Units

To explain how a universe containing conscious beings like us might emerge from the quantum vacuum, we must postulate that the quantum vacuum is inherently conscious as well. During the past five years, I have endeavored to formulate a conceptual framework with the potential of explaining why reality has the inner and the outer properties it displays. This is a highly speculative model at this point, and I present it because I believe it has the potential to unify the inner and outer realities and explain the evolution of both, starting with the assumption that *all realities emerge from the free-will communications of a vast number of conscious entities*.

In the conceptual framework I am proposing, I call *One* the totality of what *potentially* and *actually* exists.

To manifest a universe like the one we know, One must be dynamic and holistic and have both interiority and exteriority. Interiority is what's needed to explain the existence of consciousness and free-will actions. These are the crucial properties that are missing in the current physical theories. In the model I propose, they express the "capacity" and "desire" of One to *experience* and *know* itself. The human words I am using in quotation marks are clearly inadequate to describe the "urge" and "curiosity" of One to "know itself," but I must use what we have.

Dynamism, holism, and self-knowing must then be intertwined aspects of One, *facets of an indivisible whole* rather than "independent variables." This means that self-knowing must be dynamic and holistic and must deepen itself, connecting itself evermore with all the other instances of self-knowing. This also means that any new instance of self-knowing is a transformation from *potential* existence into *actual* existence, where potential existence is the "reservoir" of self-knowing that has not yet manifested.

Dynamism means that One cannot stay the same but must continuously grow its self-knowing, instant after instant. Holism means that One has no separable parts—that is, within One, everything is connected. Finally, *the capacity, desire, and curiosity of One to know itself is the true “cause” of all manifestation and evolution.*

In other words, actual existence and self-knowing are two faces of the same coin in the sense that coming into existence is simultaneous with being known for the first time. *To exist is to be known* and vice versa. And, once known, the self-knowing of One can never be annihilated. Therefore, the *memory* of the self-knowing must exist within the “substance” of One.

With this characterization, each new self-knowing of One brings from potential to actual existence “something” I call a *consciousness unit* (CU). This unit reflects the totality of One (One has no separable parts), and yet it is also a part of One because One is never done knowing itself (dynamism), and thus there must be continuing instances of self-knowing. Each CU must then be a wholeness, share all the properties of One, and have a unique identity that distinguishes it from the other CUs. Thus, each CU is a *part-whole* of One. Like One, a CU cannot be the same from instant to instant (dynamism), it can never be separated from One and from the other CUs (holism), and it also must continue to deepen its own self-knowing and the knowing of the other CUs.

I should point out here that in this framework, the CUs exist before space, time, matter, and energy. Thus, they constitute the quantum vacuum out of which our universe emerged.

The Properties of the Consciousness Units

The CUs are conceptually similar to the *monads* described by Gottfried Wilhelm von Leibniz in his famous book titled *Lehrsätze über die Monadologie* and published in 1720 (Leibniz, 1965).

In summary, each act of self-knowing of One gives birth to a CU. Each CU is a *self*, endowed with three fundamental properties: consciousness, identity, and agency. Consciousness is the capacity to perceive and know (comprehend) itself and the other CUs. Identity is the inherent ability to identify itself within itself and to be identifiable as a CU by the other CUs. Agency is the capacity to *interact with free will* with the other CUs to deepen both its own self-knowing and the knowing of the other CUs. Action requires the CU’s capacity to *shape symbols* out of itself to communicate with other CUs. The totality of the symbols created by all the CUs represents the outer informational reality of One.

A crucial feature of this framework is that each CU has an inner *private* semantic reality and an outer *public* symbolic reality. The outer reality of a CU symbolically represents its inner self-knowing and the voluntary symbols that represent its actions. Furthermore, when a CU observes another CU, it can perceive as qualia only the outer symbolic reality of the observed CU, whereas its inner reality is strictly private and cannot be known directly.

The essence of One is its capacity and desire to know itself through the many CUs it manifests. *Only One knows the interiority of every CU and combinations of CUs.* In fact, One knows all manifestation from the inside and is also *what connects All from the inside.* One is the interiority of all that exists, innocent of the outer reality, which is only a representation of its self-knowing necessary for the CUs to know each other.

Since each CU is a part-whole of One, the CU perceives the other CUs as both self and not-self, a contradiction only if one believes that each consciousness is separate from the others. In the awakening experience described in the introduction, I experienced myself as both the world and the observer of the world, allowing me to state with confidence that this understanding not only is possible but also opens the mind and the heart beyond what any ordinary conscious experience can.

Essential to this framework is also the idea that the symbolic aspect of each CU stands in some correspondence with its meaning, and that this correspondence is the same for all the CUs. Therefore, it becomes possible to bootstrap a *universal* communication language between the CUs, an indispensable tool for each CU to know another CU like itself, thus deepening their mutual self-knowing (Faggin, 2015).

This deep communication is also what leads to the *combination* of CUs into a hierarchy of selves, just as the quantum fields “combine” to create atoms, molecules, macromolecules, and so on.

The CUs are the *ontological* entities out of which all possible universes are “constructed,” and therefore the quantum fields of our universe are organizations of CUs. What physicists call a quantum field, however, is only the outer aspect of an organization of CUs. Therefore, the quantum fields of physics and the conscious quantum fields I am proposing are very different entities. By adding “selfhood” to the quantum fields, the nature of reality changes in a fundamental way.

A CU is a *self*, and so is any coherent combination of CUs. A self is an entity with identity, consciousness, and agency, sharing all the attributes of One (dynamic, holistic, and self-knowing). Agency is the outer expression of the free will of a self, and free will implies *intention* and *purpose*, acting like a vector in which intention corresponds to the magnitude of the vector and

purpose corresponds to its direction. Through agency (communication) and consciousness (perception, comprehension/meaning), each self increases its own self-knowing and the knowing of the other selves.

The Combinations of CUs

In this framework, the self-knowing of a CU is a *direct* comprehension of itself because the qualia that carry the meaning to the CU cannot be distinguished from their meaning. Each CU can also perceive as qualia the outer symbolic reality of the other CUs and comprehend their meaning to the extent that a similar meaning is already known. In this case, the CU's comprehension is *indirect*, mediated by symbols, and the CU can discriminate qualia from meaning. Action is the capacity of a CU to freely create symbols to communicate *meaning* with other CUs.

Through their voluntary communications, the CUs deepen their mutual self-knowing, collectively creating a universal language with symbols of growing complexity as their self-knowing and joint knowing grows.

Through repeated cycles of observation, comprehension, and action (response), meaning is organized in successive "layers" and comprehended by the CU as a *gestalt*, a whole that is more than the sum of its parts. Yet the same gestalt reveals also the presence of some *unexpressed* meaning. It is this awareness of "unfinished business"—knowing of not knowing—that provides the impetus to the CU to always seek further comprehensions. In this model, the meaning not yet understood is felt as something that remains elusive. Therefore, the outer symbols can only express the inner structure of the meaning that is understood.

Two CUs, A and B, that have a similar self-knowing will have similar outer symbolic information whose qualia perception will produce a gestalt meaning that feels "familiar" to each. This familiarity may lead to the desire and decision to communicate with each other. Repeated cycles of symbolic communication with each other will deepen their own self-knowing and the knowing of the other through a dialogic relationship.

When A and B reach their *maximum* mutual comprehension, a portion of the meaning of A is *identical* to a portion of the meaning of B. From the perspective of One, this is a *single meaning*, not two, even though the *same set of symbols* appears twice; once in the outer reality of A and once in the outer reality of B (because symbols and meaning stand in the same correspondence for all CUs). But now there is one meaning with two identical sets of symbols.

Once the maximum joint self-knowing of A and B has been reached, it can no longer be increased by the individual actions of A and B, causing *a new self to emerge from One* to continue the deepening of the joint self-knowing

in response to the urge of One to know itself. I call this new self AB, the combination of A and B. AB has an independent existence from A and from B, though it does not subsume A or B, both of which continue to have their own independent existence. AB is a self at a higher hierarchical level than A and B, and it will seek to relate with another self at its same level of comprehension to increase their joint self-knowing, eventually creating the next-higher hierarchical level.

If DP (the combination of D and P) and AB sense having much in common, they may decide to communicate by creating new symbols that are combinations of the symbols of A, B, D, and P. This process will lead to discovering all the possible self-knowing common to AB and DP through their individual free-will actions. When their *maximum* joint self-knowing has been achieved, a portion of the meaning of AB is identical to a portion of the meaning of DP. As in the previous case, a new self, ABDP, will emerge from One with the task of deepening the newly acquired joint meaning.

In summary, the sets of symbols at the CU level form the ever-growing vocabulary of a universal language. The symbols of the higher levels in the hierarchy are combinations of these basic symbols that may appear multiple times in the fields of the CUs. And the selves belonging to a specific hierarchical level can comprehend the symbols of lower hierarchical levels but only partially the symbols of higher levels than theirs.

The ever-growing number of public symbols of all the CUs and their combinations forms a public *informational space* called I-space. The totality of the inner semantic realities forms a *semantic space* called consciousness space, or C-space. C-space and I-space form a holistic structure that describes the irreducible semantic-symbolic nature of One.

I should remind readers here that C-space and I-space are not physical spaces like the space of our universe. They are realities existing prior to the birth of any universe.

I will describe later how physical worlds may be constructed through organizations of I-space symbols. These physical worlds are called P-spaces, and I am calling the overall conceptual structure the “CIP framework,” where C stands for C-space, I stands for I-space, and P stands for P-space.

Notice that our concepts of space, time, and quantum fields represent how we currently *imagine* physical reality to be constructed. However, we don’t really know *what* these entities are. Scientists have postulated certain mathematical relationships to exist among them, which we take seriously because they predict much of what we can measure. However, these entities, as currently defined in physics, can neither predict nor explain the existence of consciousness, meaning, purpose, and free-will action, which are irreducible *qualities* of existence according to the CIP framework.

The Creation of Physical Realities

So far, I have described the creation of CUs and combinations of CUs motivated by the abiding desire of One to know itself. This explosion of communicating conscious entities, each with its own free will, gives birth to hierarchies of selves, hierarchies of meaning, hierarchies of symbols, hierarchies of syntactical rules, and, finally, hierarchies of languages. In so doing, the conscious selves create various organizational structures, layer after layer, in which to experience themselves and increase their self-knowing.

Since each organization must be held in place by the free-will *cooperation* of the selves rather than through the *coercion* of physical laws, the more complex the structure, the more improbable its construction would be. Therefore, the self-knowing of the individual intentions and motivations of the selves that wish to create a coherent organization may be lower than what's achievable in the unconstrained environment of C-space and I-space. The needed comprehension may be achieved only by the creation of an interactive "educational system" in which each self can safely discover what keeps it from voluntarily collaborating with other selves.

I venture to say that the earth ecosystem could be this educational system, an environment that allows selves to learn the subtle give-and-take necessary to create and maintain ever more complex organizations. Not surprisingly, human beings have also discovered the same need for a sophisticated educational system in modern society to create and maintain their own complex organizations.

The task of creating a higher level of order through the *voluntary* cooperation of many hierarchical levels of units, each unit free to choose, is clearly daunting. This sounds like an impossible problem, and yet *life* has solved it, not through the coercion of deterministic physical laws, but through the free-will cooperation of all the hierarchical levels of elementary particles, atoms, molecules, macromolecules, organelles, and so on, leading to a hierarchy of organisms, each with a high degree of freedom and all cooperating in a gigantic and evolving ecosystem.

In the CIP framework, the earth ecosystem has been voluntarily and cooperatively created by a hierarchy of selves of which we are an integral part, with the purpose of learning how to create ever more complex *collaborative* structures.

Thinking about how to create an advanced educational system, the image of a highly sophisticated *simulator* comes to mind. After all, a simulator is what we had to build to learn how to land a craft on the moon, for example, because this process had to work the first time and required knowing much more than the equations of motion of the lunar craft. The human pilot had to *experience* as closely as possible the *gestalt* of the landing process as the controller of an unfamiliar craft in an unfamiliar celestial body.

The Physical Universe as a Simulator

In the simulator metaphor I have in mind, our body is conceptually similar to the avatar in our primitive virtual reality games. However, the avatar that appears on the computer screen is not who we are. We control the avatar, but we exist *outside* the computer.

In the CIP framework, our physical body is animated and controlled by our conscious self, but the conscious self is not our body. And just as we do not exist *inside* the computer that creates the virtual reality, we do not exist *inside* the physical universe that creates the body we control.

When we get engrossed in a video game, we may almost believe for brief periods that we are the avatar we control. In the game of life, we are completely identified with our body because the interface between our conscious self and our body is *seamless* compared with the crude interface between our body and the avatar.

In a video game, we don't cease to exist if the avatar dies, and we can start a new game by simply "wearing" a new avatar. The avatar is just an *interface* allowing us to interact in the virtual reality created by the computer. Likewise, our body is just an interface to the physical world that we currently believe is the only reality. However, the real entity is not the body but our conscious self who's wearing the body to act in the far more sophisticated virtual world we call the physical universe.

Nested inside our quantum physical universe, there is a classical computer in which we have created another virtual reality with avatars controlled by our quantum-classical bodies. Notice that since each body is controlled by a conscious self, each avatar is controlled by a *portion* of the same consciousness that controls the body.

I therefore surmise that the conscious self that controls each body may also be a portion of a larger self whose existence we have yet to recognize. If so, each one of us may be a portion of a vaster self who is the one who decided to wear the body each believes itself to be. Without realizing it, we are simply repeating the same pattern at different scales.

Notice also that we are the ones who have cooperatively imagined, constructed, and programmed the computer to produce the virtual reality that is giving us an enriching experience. Likewise, those vaster selves may have cooperatively imagined, constructed, and "programmed" what we perceive as the physical universe.

In the CIP framework, the vaster selves we actually are are the ones who have collectively created the physical world, the earth ecosystem, and the bodies we wear in this remarkably immersive virtual reality experience we call life.

In other words, our consciousness exists neither inside the physical universe nor inside the computer that exists inside the physical universe. In fact,

the image of the physical universe created by the sensory-brain system of our body is not even close to representing what's truly "out there." We have in fact no idea about what's out there (Hoffman, 2016).

It's time to wake up from the illusion of being our body in a universe that is "pictured" based on the signals sensed from the environment and produced by our brain and body. Our species has developed enough that such a transformative realization can now be achieved while in this life: we are not the bodies we wear, and we are not "inside" the physical universe in which our body exists any more than the body that controls an avatar is "inside" the computer in which the avatar exists.

I think we are conscious beings existing in C-space and I-space, the irreducible and fundamental semantic-symbolic reality of One, and a small portion of our consciousness is controlling a body made of I-space symbols, just as an avatar is made of the far less expressive *Boolean* symbols that belong to a digital computer.

I think we are here to learn how to voluntarily cooperate with each other at a much higher level of comprehension than we have ever known, to be able to collectively build the next hierarchical level of being that requires far more coherence with each other than we now possess.

In a video game, a portion of our consciousness is concentrated on the game while the remaining consciousness pays attention to the physical reality outside the game—what we believe is the only *real* world. In the game of life, our consciousness has been almost entirely hypnotized by the illusion of being the physical body, unaware that our physical reality may itself be a vaster and more sophisticated virtual reality.

Mankind is about to awaken. In the current condition of half sleep, most of us would like to continue sleeping, while some of us are beginning to open our eyes to a new reality. As we become aware of a greater world, each of us can develop our consciousness to the point that only a portion of it will be focused on the business of controlling the body, while the rest can become aware of the vaster self with whom we can explore the greater reality in which we truly exist.

The Embodiment of Conscious Selves

The notion that we might be living in a simulator constructed by some alien civilization has appeared in several science fiction novels and movies. This hypothesis has been taken seriously by the philosopher Nick Bostrom (2003), a conjecture that has received lots of attention. This idea, however, would require the existence of a computer as complex as the universe. How is that possible?

The way I imagine the evolution of such a “simulator,” as a computer scientist, is by recognizing that the structure of any human language is roughly like that of a high-level computer language. The big difference is that the latter is extremely precise, whereas the former is *ambiguous*, requiring conscious comprehension to be understood. A computer language, once expressed by a properly trained programmer, can be *mechanically* translated by a “compiler” program into several hierarchical levels of languages, terminating with the actual binary program that typically runs in the same computer in which the compiling was done.

Imagine now a language made of *thoughts*, by which I mean not the mentally verbalized thoughts we normally think a thought is, but rather the “multidimensional image” that is the real thought before it “collapses” into a string of mental words (symbols). This image comes closer to the idea I have about the I-space symbols used by the organizations of CUs to communicate with each other.

Imagine now that this kind of thought expressing a *desire* could be broken down into several lower-level images comprehensible by several conscious beings belonging to a lower hierarchical level. Each of these entities could then break down its own sub-image further and pass the pieces down and so on until the lowest-level description is reached—the level corresponding to the basic instructions of a computer. At this final level, a very large number of conscious selves would respond to this set of symbols with a set of “Lego-symbols” representing their answer to the query. Moving up the hierarchy now, Lego-symbols will automatically *construct* step-by-step the symbolic virtual reality expressed by the original prescriptive thought.

I am introducing two different kinds of symbols here: the top-down “live symbols” that *describe* the reality to be constructed and the bottom-up Lego-symbols (L-symbols) that are the “interlocking” symbols necessary to *construct* the virtual reality prescribed by the high-level thought. L-symbols are the closest that I-space symbols can get to mechanical symbols. I imagine the elementary particles in their semiclassical behavior to be a good analogy to the L-symbols.

In essence, the top-down process lays down the abstract *pattern*, and the bottom-up process fills in that pattern with “matter.” In this process, thought comes before matter. The task of matter is simply to automatically “fill in” the mental pattern. Notice that the *crucial task of laying out* the detailed pattern is accomplished by *conscious selves*, not by *mindless* laws of physics. The laws of physics only describe the behavior of the L-symbols. That’s why the laws of quantum physics are probabilistic: they can predict only the statistical behavior of atoms and molecules, not the specific behavior of each individual atom. This is also why, if we change a few atoms in

statistical inert matter, nothing much changes, whereas in living conscious organisms even a single atom misplaced in the genome can make the difference between life and death.

Here is the big surprise: *within I-space, the construction of a simulator can be done without a central computer*. The interplay of the various hierarchical levels of these two classes of symbols led by *cooperating conscious selves* plays the same role as a computer program without requiring an actual computer to run the program.

In this conjectured organization, each relevant live symbol has a free-will intelligent agent behind it to determine the appropriate L-symbols to use instead of relying on a deterministic mechanical computer that mindlessly manipulates meaningless Boolean bits. This is also the way in which cooperating human beings are able to put a man on the moon or design a computer before one existed even in concept: through the interplay of conscious creative thinking with the concurrent construction of material structures that reflect those thoughts.

In this view, our thoughts and emotions represent high-level prescriptive symbols that will guide the production of the “reality” we will experience. That reality is constructed with L-symbols to respond to our collective *true* desires, doing the best to optimally navigate the possibly conflicting aims of the various entities involved.

To create realities that satisfy *all* the conscious selves, we have to learn to formulate “pure” thoughts and emotions, and this requires becoming aware of our true intentions and purposes and correct any distortion and misunderstanding. I believe that’s what we are here to learn.

The Nature of P-Space

With this background, we can now further explore the nature of P-space (physical space in the CIP framework): imagine a virtual reality in which there are several avatars interacting with each other and with *inert* objects in accordance with a set of rules run by a digital computer. Inert objects have no degrees of freedom controllable from outside the virtual reality, whereas each avatar has several degrees of freedom that must be controlled by a human body existing outside the virtual reality. Therefore, a specific set of the avatars’ behaviors can be determined by the decisions of the bodies. In other terms, each avatar is a subroutine within the virtual reality program *inside* the computer, partly controlled by a body *outside* the computer.

I will now describe the process occurring between one avatar, A, and the body A*, recognizing that this same process occurs for all the other avatars and bodies in the virtual reality. In this example, the “connection” between

A and its controlling body A* is made through direct implants to the brain of A*, wirelessly exchanging information. This is a much more advanced technology than is currently available, though it is possible in principle. Notice, however, that the algorithmic rules that govern the virtual reality cannot fully determine the behaviors of the avatars because the commands of A* to A don't have an algorithmic origin, as we will see.

A* is in bed, undisturbed by physical reality, receiving classical (Boolean) information generated by avatar A. A* responds to that information to act as he pleases in the virtual reality through the free-will commands he sends to A. The information A* receives is entirely processed by the computer, based on the simulation of the signals his avatar exchanges with the virtual reality world. That information is then transformed by the brain of A* into new symbolic information that gives rise to the experience of the virtual reality within the consciousness, A**, that controls the body A*. This is consistent with the CIP framework, in which the consciousness of the body is “outside” the physical reality in which the body exists.

The body A* is both quantum and classical, interfacing quantumly with the self A** and classically with the implants in its brain. Notice that the self does not exist “inside” physical reality any more than the body exists inside the computer. The computer is strictly a classical structure existing within the quantum-classical physical reality in which the bodies also exist. A body is then like a “subroutine” running within the quantum-classical “computer” that is our physical universe, controlled by a purely quantum structure existing “outside” the universe. This is the self A** with free will and consciousness, existing in C-space and I-space and experiencing *both* the physical and the virtual realities in superposition. A** acts in physical reality through a quantum-classical body and in virtual reality through a purely classical avatar.

P-space is then the *experience* of the virtual reality within the experience of the physical reality that emerges in the consciousness of A**. If A** were focused primarily on the virtual reality, his experience of the physical reality would be “reduced” like the experience of our emotions when we are focused on physical reality.

This analogy shows that we can simultaneously exist in nested realities because virtual reality exists inside a vaster reality, physical reality, and physical reality exists inside an even vaster reality: I-space and C-space, the fundamental symbolic-semantic reality of the selves. Before computers existed, this example would have been unimaginable. The possibility to create virtual realities with computers has allowed us to experience and comprehend the fundamental *informational* nature of our physical universe in contrast with the materialist view of old.

Physical reality is just information, but information alone is not enough: the “stuff” of which everything is made must be able to freely use information to communicate and must also be capable of self-reflection, through which information is *experienced* and *known*.

P-space is the experience of a self in C-space obtained by perceiving a set of I-space symbols produced by the body the self controls. The body is a special informational structure made of the same set of I-space symbols that constitute the physical universe in which the body exists. Thus, the nature of P-space depends on the nature of the sensory and information processing system that each physical body is provided with.

Each animal species has a different representation of the world. And each phenotype of a specific species will experience a variation over the generic representation common to that species. Each body creates its own I-space symbols that the self experiences as its P-space. Only the P-spaces produced by bodies of the same species can be expected to be highly correlated.

The physical universe is then like a giant quantum virtual machine nested inside the sea of I-space symbols, and each body is a virtual machine nested inside the universe to which it belongs. I-space, universes, bodies, computers, virtual realities, and avatars are successive *nested levels* of informational systems, ultimately all made by I-space symbols. Figure 8.1 illustrates the model.

Within the CIP framework, there is no separate computer anywhere. We truly exist in C-space and communicate with I-space symbols. Since C-space and I-space are two irreducible aspects of a holistic reality, we are the “programmers,” the “programs,” and the “experiencers” of our collective creations, without any separate “hardware” hosting the programs. All physical realities are created by hierarchies of languages shaped by cooperating hierarchies of selves. In this conceptualization, it is relatively easy to imagine a virtual universe nested inside another virtual universe and so on to create universes inside universes in bewildering complexity.

The Scientific Study of Inner Reality

The current scientific method is based almost exclusively on *third-person* observations and experiments. These experiments cannot adequately deal with the inner world of sensations, emotions, thoughts, and spiritual feelings that are exclusively *first-person* experiences.

By making outer measurements on a person’s body, it is impossible to determine the deep subjective meaning of what’s measured. Only the embodied conscious self can know that meaning. For example, when scientists scan the brain with functional magnetic resonance imaging to find correlations

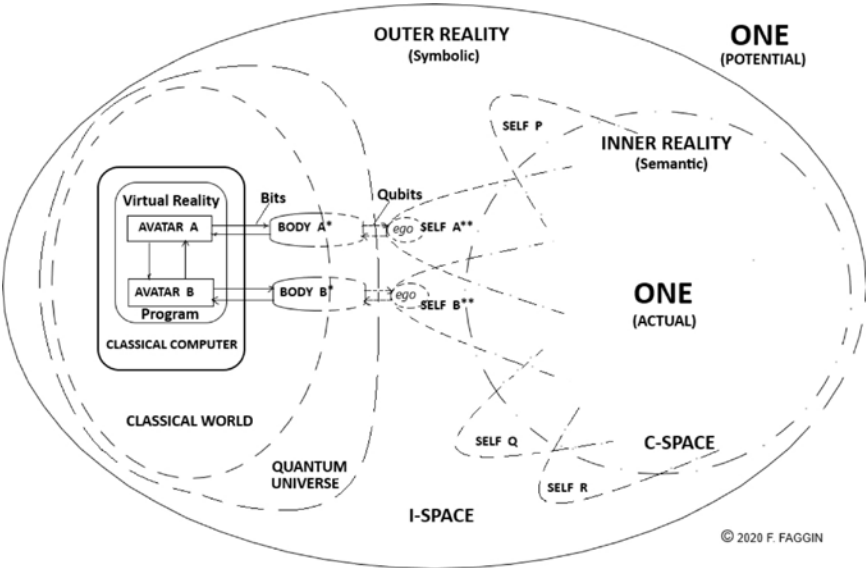


Figure 8.1. The interpretation of a computer virtual reality (VR) within the CIP framework. I-space is the outer symbolic world that contains our quantum universe as one of many possible physical universes. Within the quantum universe, there is a classical world in which only one state at a time manifests from the quantum universe that contains all the possible states in superposition. The boundary between the classical world and the quantum universe is shown with dashed lines because the first is open to the second. Only the computer, shown with a solid line, is strictly classical, as long as its environment remains within the narrow operating range of computers. The computer bits are represented by statistical properties of macroscopic matter, and inside the computer there is a VR program in which two avatars, A and B, interact with each other. Each avatar is controlled by a quantum-classical body (A* and B*) whose classical portion communicates with the avatar using bits. The quantum portion of the body communicates with the ego portion of vaster selves, A** and B**, using qubits. Each self has an outer symbolic and an inner semantic aspect. The totality of inner space forms C-space, and the totality of outer space forms I-space. P-space is the private experience of physical reality in superposition with the experience of the VR. This experience exists in the C-space of the A**'s and the B**'s egos. Each embodied self creates its own P-space. (Original artwork by the author)

between physiological measurements and subjective spiritual, mental, emotional, or physical states, they must rely on subjects correctly reporting their inner states. The subjective *meaning* of a mental state cannot be measured from the outside.

For example, if I feel angry, the significance of my anger is the crucial information I need. Knowing that I am angry is not enough. Functional magnetic resonance imaging can produce a “map” related to a generic anger, but

the deep meaning of that state for any individual cannot be revealed. Often, even the person who experiences anger doesn't know the true meaning of his state of mind, for only with a careful conscious introspection is it possible to understand such hidden meaning. This fundamental limitation of the scientific method has led many to minimize or even to deny the reality of our inner world, equating us with computers. Denial of the crucial difference that consciousness makes is equivalent to stripping human beings of their humanity.

Physics assumes the existence of matter, energy, space, and time (MEST) with certain properties and seeks to derive all other observables by using mathematical theories that postulate relationships between those fundamental variables. These relationships define the basic laws of physics that are held to be universally valid and immutable. The soundness of this approach is predicated on the experimentally verifiable predictive capacity of the theory when applied to any phenomenon.

Centuries ago, humans invented deterministic laws that "atoms" obey, from which all physical reality could mindlessly be constructed bottom-up only. This "command and control," *coercive* view in which only the *impersonal* laws of physics determine what happens gave birth to classical physics and appeared to work until the end of the nineteenth century. But when the real atoms were found to disregard those precious laws, the universe stopped being the clockwork mechanism we had imagined because its smallest "gears" didn't behave like gears at all.

Quantum physics was born to explain the strange behavior of the quantum particles, and with it our representation of the nature of reality had to change completely despite our attachment to the idea of a clockwork universe. Quantum physics is compatible with free will, but we resist looking into the consequences of a world in which the quantum fields have free will. Few venture there because admitting free will opens a Pandora's box! With free will comes "interiority," the place in which free will exists, a place that doesn't look at all like MEST, the matter-energy-space-time out of which everything else seems to be made.

Free will is just the tip of the iceberg, however, because it carries into physics everything else that belongs to the inner world: selfhood, consciousness, qualia, purpose, and meaning. Physicists generally deny that the meaning and purpose we experience have any direct impact on physical reality. Focused only on the outer symbolic reality, they assume that consciousness *spontaneously* emerges only from complex organizations of inert matter devoid of any interiority, even though no one has ever given any plausible explanation of how this can possibly happen. It is time that free will and consciousness be taken seriously by the scientific community.

Taking a diametrically opposite position, many spiritually oriented people believe that only the inner reality of spirit or of mind exists and downplay or deny the reality of matter.

To create a framework that unites the inner and the outer realities, I decided to *extend* the experimentally verified ideas of quantum physics. According to them, physical reality is holistic, dynamic, and probabilistic. I have taken holistic and dynamic as fundamental principles and added a third principle: *One is seeking to know itself*. The probabilistic aspect of quantum physics is then a consequence of this principle, and One could be imagined as the “quantum vacuum” out of which our universe emerged.

However, contrary to the purely mathematical idea of quantum vacuum devoid of any meaning, I imagine One as the *interiority* of all existence whose immense love, curiosity, and desire to know itself causes everything to emerge into existence out of itself.

If we start from the hypothesis that CUs exist before any physical reality, we must then explain the concepts of space, time, matter, and energy—so far held to be fundamental—with new primitive concepts that derive directly from the nature of the CUs. From this different conceptual structure, we must then recover the laws we already know as special cases of more fundamental phenomena expressed with the new concepts.

This new vision requires a complete new interpretation of the nature of reality that needs to be fleshed out with the contributions of many other thinkers who share similar ideals. The payoff will be a new theory that unites inner and outer realities and portrays a *meaningful* and *purposeful cosmos* rather than a dystopian universe. This endeavor will make the difference between life and death for mankind.

WE ARE NOT MACHINES!

Today we read that artificial intelligence based on artificial neural networks will soon surpass human capabilities. Some scientists even predict that in less than forty years, computers will become conscious. Is this true? Are we simply biological computers? If we think we are only information processing systems, what crucially distinguishes us from our machines? Let’s take a critical look at these questions.

Information and Symbols

When scientists talk about information, they almost always mean Shannon’s information, described for the first time in a famous article published in 1948.

Shannon, however, never defined information. He only defined “quantity of information,” and that depends on the probability that a specific symbol may appear next in a sequence of symbols. In his definition, the quantity of information carried by a symbol is inversely proportional to the probability of the appearance of that symbol.

Shannon called the average quantity of information carried by a sequence of symbols *information entropy*. Surprisingly, by changing the sign of the information entropy formula, we obtain the same formula that defines thermodynamic entropy, a fundamental concept in physics. This strange “coincidence” has brought the concept of information into physics, where it has been highly influential.

In Shannon’s concept of information, the meaning of information is completely absent and irrelevant. What matters are only the probabilities of the appearance of the symbols. This is perfectly adequate to describe certain core aspects of the behavior of computers and communication systems. However, for human beings, the concept of information is inextricably linked to the meaning of the symbols. In fact, a symbol without meaning is just a *signal*, something that doesn’t necessarily imply a meaning.

Notice that in the CIP framework, the meaning of a symbol is irreducibly linked to the nature of comprehension and exists only because there is consciousness. In a computer, the meaning does not exist because abstract symbols (signals) are transformed into other abstract symbols according to *explicit* rules (the algorithms) or *implicit* rules (data correlations) acquired via the “mechanical” learning process of artificial neural networks. But without consciousness, there is no real comprehension; there are only algorithms and data correlations.

A Universe Without Meaning

Theoretical physicist Giacomo Mauro D’Ariano and his collaborators have shown that quantum mechanics and QFT are entirely derivable from six purely informational postulates (D’Ariano, 2017). Quantum physics therefore tells us that matter is simply “made” of organizations of *qubits*, which are the quantum mechanical generalization of the Boolean bits used in classical computers. Matter is purely abstract information—information without any meaning.

Thus, current physics describes a completely meaningless reality, whether it be an atom, a stone, a computer, or a living organism. But just because meaning has been eliminated, by definition, doesn’t mean that reality is meaningless. Meaning can be obtained only by a conscious self directly observing itself and by “decoding” outer symbols into meaning *within itself*. By declaring consciousness epiphenomenal, meaning has been excluded from reality.

How can a physics entirely based on abstract information, in which abstract symbols can be transformed only into other abstract symbols, explain the existence of consciousness? How can the meaning each of us knows exists within our consciousness be brought within physics?

Live Information and Live Symbols

As described in the previous section, to explain the nature of consciousness, we should start with a new conceptual framework in which the quantum fields of elementary particles must be *conscious selves*. The concept of field must then be extended beyond its current definition within QFT.

The abstract quantum information that describes the current quantum fields of physics cannot describe information that is *inseparable* from its meaning to conscious selves. The two concepts are different. I will use the term “live information” to distinguish this latter information from its abstract counterpart. Abstract information must then be a “reduction” of live information.

I should also point out that the matter of our physical world can only symbolize the abstract Boolean information describable with bits. It cannot represent the *abstract* information of the quantum fields that requires qubits in superposition and is currently denoted with vectors in a complex multidimensional space called *Hilbert space*. In other words, live information is even more general than abstract quantum information. And quantum information is more general than the binary Boolean information that can be represented by the observable matter of our physical universe.

The formalism of quantum physics includes the superposition of all the possible states that could manifest in our physical reality and describes their collective temporal evolution. Then the *miracle* happens: when the conversion from the many possible states *reduces* the many to the *one* state that we find when we perform a measurement. Here hides the presence of free will, which is compatible with QFT and predicts true creation.

The mathematical formalism of QFT cannot tell us when and how this conversion occurs or which state will manifest. It can tell us only *the probability of manifestation* of each possible state. This phenomenon goes by the name of “collapse of the wave function” and is part of the so-called *measurement problem*, whose interpretation is still obscure nearly one hundred years after it was first advanced.

In the CIP framework, the collapse does not exist as we have imagined. There is instead the solution of an *optimization problem* that takes into account all the *free decisions* of all the conscious entities that are involved in the creation of the common reality. This problem cannot be solved by the

Boolean matter of our physical universe, for it requires another level of reality out of which our physical reality emerges.

Quantum physics cannot give us the solution because the decisions of the conscious entities are *free* and thus *cannot be known* a priori. Within CIP, with the “collapse” of the wave function, a live symbol containing many possibilities will manifest with a certain probability as a Lego-symbol at a specific location in space and time.

Coherent and Incoherent Live Symbols

Let’s imagine the conscious field of electrons and the conscious field of protons as two selves communicating with each other. Their interactions manifest in our physical reality as electrons and protons appearing in spacetime. With our instruments, we can observe only the *projection* in our spacetime of *processes* occurring in a vaster reality about which we currently know very little. Therefore, “electrons and protons appearing in spacetime” is how we currently describe within our reality the observable aspects of free communications occurring among conscious entities in a vaster reality.

These communications employ live symbols, which we imagine as particles after the quantum wave function collapse. Before the collapse, they are special informational states in superposition.

The free electrons and protons are the manifestations in our physical world of the live symbols of the electron-self (the conscious field of electrons) and the proton-self (the conscious field of protons), respectively, because each live symbol is “controlled” by a different self.

In the CIP framework, when an electron and a proton are combined into a hydrogen atom, it means that the electron-self and the proton-self have maximized their joint self-knowing and have created a new higher-order self, a hydrogen-self, and a new live symbol that manifests in our reality as a hydrogen atom. The hydrogen-self is a field of fields, existing within both the electron and the proton fields. The live symbol of the hydrogen-self is the *integration* of the live symbols of the electron-self and the proton-self.

I use the expression *coherent live symbol* to indicate a symbol that integrates lower-level symbols and is controlled by a single self. I use *incoherent live symbol* to indicate the *sum* of two or more coherent live symbols, each controlled by a different self and thus “disconnected” (incoherent) from each other. An electron and a proton interacting in close proximity without forming a hydrogen atom are the manifestation in the physical world of a live incoherent symbol because it is the sum, or juxtaposition, of two distinct live coherent symbols, one controlled by the electron-self and the other controlled by the proton-self.

There is therefore a special connection (the shared meaning) between the electron-self and the proton-self, producing the hydrogen-self and forming the new live symbol (the hydrogen atom) at a higher hierarchical level. This also means that the proton-self and the electron-self no longer have control over their respective symbols when these have been integrated into the hydrogen-symbol.

Most of the *objects* surrounding us are the manifestations in our spacetime of incoherent live symbols.

The Consciousness of a Stone

Take, for example, a stone. A stone is made of a jumble of small crystals composed of different atoms mixed with other amorphous materials. The crystals are of various shapes and sizes, and each of them is more or less regular within its interior.

A stone is therefore the physical manifestation of an I-space *incoherent live symbol* composed of the set of live coherent symbols that are the outer aspects of the many discrete selves that compose what we perceive as “that stone.” Each live coherent symbol is controlled by the free will of its respective self. However, there is no *unified* and *coherent* stone-self that can perceive itself, know itself, and control the stone with its free will, as would be the case if the stone were the live coherent symbol of a unified self. A stone is the juxtaposition of different selves whose interactions appear in our physical reality as an incoherent collection of separate parts in close spatial proximity without any evidence of a unified consciousness. Therefore, no corresponding live coherent symbol can represent the stone.

This situation is similar to a crowd of people and animals in which each entity is conscious and yet the crowd is not a coherent conscious self even though each entity in the crowd knows itself to be part of the crowd and interacts with other entities, both in the crowd and in the environment, with free will. In a stone, as in a crowd, many different selves coexist and communicate with each other and with the surrounding environment without *integrating* into a higher-order self that has “stone,” or “crowd,” as a new live coherent symbol.

In other words, the stone is not a self with the capacity to perceive, comprehend, and act with free will and with a unified point of view or perspective. To have a stone-self, the ensemble of the selves forming the stone would have to *integrate* to produce a single self, in which case these selves could no longer control their respective symbols because the symbols would be now integrated into the new live symbol. For a stone-self to exist, it would require the creation of many new “inner connections” (joint self-knowing) among the

various interacting selves that would integrate their respective live coherent symbols into a new and unique coherent symbol.

The integration of various selves to produce a live coherent symbol capable of being controlled by a C-space self while manifested in our physical world would produce a *living organism* with the capacity to self-reproduce and show a level of dynamic interaction with the environment incommensurable with the interactions possible by stones and man-made machines.

Life exists in a deep and irreducible symbiosis with the environment, with which there is a constant exchange of matter, energy, and information in a profound *dynamical equilibrium* in which the symbol is never the same throughout its lifetime.

Computers Cannot Be Conscious

The binary digit, or bit, is the simplest abstract symbol used to represent two possible states: “1” or “0,” “true” or “false,” “on” or “off.” A computer bit is represented by a *convention* that must be strictly respected in all electronic circuits. The convention could be the following: “If the number of electrons present in a node of a circuit is more than 1,000 above the average, the state of that node corresponds to ‘1.’ If the number is less than 100, the state of the node corresponds to ‘0.’ If the number is between 100 and 1,000, the state is undetermined and could cause errors.” The bit is an abstract symbol. It is a “collapsed” quantum bit, or qubit, where the qubit is another abstract symbol obtained from the *quantum superposition* of two possible quantum states: “1” and “0.” The qubit cannot exist in our physical reality because in our world it can manifest as only one of two possible states—that is, as a Boolean bit.

The bit can exist physically only by *forcing* a representation of it over a suitable man-made material structure. This type of information has nothing to do with the live information indivisible from its meaning and controllable by the free will of a self. The matter of which the computer is made represents a live *incoherent* symbol, as in the case of the stone in the previous example. The computer, as a physical body, cannot be controlled from within itself by the unified will of a conscious self because there is no self with dominion over the behavior of the abstract symbols that the computer matter is *forced* to represent by human construction.

The computer cannot host a *unified* consciousness because it is not a live coherent symbol, no matter how complex it is. Only living organisms, as far as we know at present, possess the special material organization necessary to represent within physical reality a live coherent symbol controllable by a unified self. A living organism behaves like a giant “macromolecule” that is constantly *re-created* and *changed* by matter flowing into and out of it. This

unbelievable level of dynamism is *the signature* within physical reality of a structure capable of hosting a unified consciousness.

This is the fundamental difference between a living organism and a classical or quantum computer. Only a live coherent symbol can represent the meaning that a self wants to *freely* communicate to other selves. And in the physical world, only a living organism has the level of dynamism and the extraordinary interdependence with the environment to properly represent a true live coherent symbol controllable by the free will of a self.

Since consciousness and free will are irreducible aspects of a self, no bounded, mechanical, physical structure obeying the laws of classical physics can ever be seamlessly “embodied” by a conscious self. To be embodied would require the capacity to communicate with free will between I-space and a quantum-classical body, thus controlling the physical structure from within.

Computers have only *mechanical* intelligence. We have *real* intelligence based on comprehension, a more general intelligence that contains mechanical intelligence as a special case. Our physical body, qua body, doesn’t possess real intelligence either, because that kind of intelligence comes only from our consciousness. What our body has over the computer, however, is *the capacity to interface with I-space and thus with a conscious self*. To be able to do so, the body’s physical structure must maintain a core of quantum coherence, an impossible achievement for a classical system like a digital computer.

The moment information is defined independently of its meaning, we have embarked on a path that leads us to describe only an abstract informational reality devoid of any interiority. In this *virtual reality*, consciousness could exist neither in machines nor in living organisms.

The artificial material structures created by humans to represent abstract information cannot represent the live information that expresses itself with live coherent symbols *inseparable* from their meaning and controllable by selves with free will.

THE EXPLANATORY POWER OF THE CIP FRAMEWORK

The CIP framework offers a conceptual structure capable of providing sensible explanations for many of the “rogue” phenomena identified in the introduction to this volume. Following is an outline of how CIP could potentially explain some of these phenomena.

In the ensuing discussion, the embodied consciousness is the consciousness that identifies with the body, roughly corresponding to the ego in psychology. The ego is only a small portion of the consciousness of a larger self—what

many traditions call the psyche or soul—existing independently from the body though communicating with it while embodied. The larger self is the self A** on the right side of Figure 8.1, and A** is in contact with the vast extra-physical information (I-space). The ego is shown as a small circle inside A** with broken boundaries to indicate that it can communicate directly with A**. In our ordinary life, the ego is unaware of its connection with A** and considers the body (A*) the source of all its experiences.

The information coming from the physical environment—both outside and inside the body—is transformed by the senses and by the nervous system of the body into the symbols that produce the ordinary experience of the physical world within the ego’s consciousness. Through the larger self A**, the ego can access additional live information, like intuitions, insights, comprehensions, and deep emotions, that the ego generally attributes to the body though they truly originate from A**.

When our body dies, we lose the ability to observe the physical world from the point of view of the body, but we keep the connection with A**, allowing us to observe the world from the perspective of our vaster self that exists in C-space and I-space and is not embodied. This deeper point of view, drowned out during our life by the *louder* body-perspective, becomes perceivable again within this model, revealing our true nature. Thus, postmortem survival is a natural consequence of the CIP framework.

Once we accept the primacy of consciousness and the existence of a hierarchy of selves that doesn’t end with human egos, we can potentially account for many other reported extraordinary experiences, like vivid and lucid dreams, genius, mystical experiences, and near-death experiences. For example, when physical stimulation ceases during a near-death incident, the ego-consciousness may become aware of its extraphysical nature, as if a veil were lifted, experiencing the reality of A** currently unknown to science. Mystical experiences can be similarly explained: when a person deeply desires to know his own nature, not to “get” something from that knowledge but for knowing’s sake, the communication between the ego and the larger self A** is activated more than usual, allowing the ego to momentarily partake of the perspective of A** in a process similar to a near-death experience.

Within the CIP framework, A** embodies voluntarily with the purpose of developing a deeper comprehension of its true intention and purpose. This is done by interacting with other selves who wear similar “costumes” made of matter and by witnessing the consequences of its actions that are ultimately informed by its most hidden intentions. Physical reality is much more constraining than C-space and I-space, forcing conflicting situations to arise that more readily reveal to the self its true intentions. In this sense, matter is like a

mirror allowing the self to know itself more fully. I like to think that matter is the *ink* with which the self writes the comprehension of itself and the world.

Explaining Anomalous Events

The essence of each of us is this extraordinary self who belongs to a physics we do not yet know, a physics from which the physics we do know emerges. Selves vaster than we are can create top-down influences on physical reality, proceeding from our intuitional and emotional levels to affecting our rational mental level and finally producing physical consequences. For example, many inventions start in this manner—some with the inventor waking up from a dream with an idea and the desire to see it through—and end up changing the physical world in ways totally unpredictable to science.

The inventor who has been so inspired can indeed freely decide to seriously pursue the idea and can accurately predict that a completely new organization of matter embodying his invention will exist a few years in the future. This is an impossible *prediction* for science to make because it comes from the *top down* and from the *inside out*. Science works instead from the bottom up only and attributes no causal power to our interiority. Science attributes creativity only to the principle of random variation and selection, which makes these types of predictions impossible.

If we accept the CIP model, we can also begin to explain reincarnation, out-of-body experiences, lucid dreaming, extrasensory perception phenomena such as telepathy and clairvoyance, and psychokinesis. Let's briefly outline the explanations.

Reincarnation

When the body dies, the ego is no longer flooded with physical information and might become aware of being part of a vaster self, in line with the spiritual maturity achieved in the life just ended. To better explain the general idea, I will use an analogy with an astronaut learning to fly a lunar lander in a sophisticated simulator. To succeed, the astronaut needs to (1) take seriously the simulation, (2) identify only with the simulated reality, and (3) momentarily forget what's outside the simulator to focus entirely on the learning task. After each session, the astronaut gets out of the simulator and conducts a "postmortem" with experts to learn what went right and wrong. And after many sessions, the astronaut will eventually master the complex task.

A human life might be like a session in the simulator, followed by (1) a postmortem with "experts," (2) some additional homework assignments, and

(3) another session in the simulator. Through the repetition of this process, the vaster self (A**) might gradually comprehend its deeper nature, becoming aware of the subtle threads that connect its various lives, recognizing the deeper reasons for its actions, and ultimately coming to know its real intentions and purposes.

Lucid Dreaming and Out-of-Body Experiences

The ego's identification with the body can be compared to being hypnotized by physical reality to the point of believing that physical reality is all that exists. As the self-knowing advances over many lives, the identification with the body might diminish, allowing new freedoms to the maturing egos. And with increasing maturity, the ego could become more open (less fearful) to begin the exploration of other realities.

Lucid dreaming emerges as the natural ability to "wake up" inside a dream and experience the dream from the viewpoint of the ego, not the situation occurring in an ordinary dream. In a lucid dream, the ego-consciousness may initially only *witness* the dream, realizing that it is "inside" a dream, *while dreaming*. As the ego advances, it may also learn to *control and direct* the lucid dream, in addition to witnessing it, beginning to explore the "dream-world," a different reality than physical reality.

An out-of-body experience is like a controlled lucid dream, except that the *induction* is different. In a lucid dream, the dream starts first, and the ego then "awakens" inside the dream. In an out-of-body experience, the ego "leaves the body" without ever losing its consciousness, often while the body is in deep relaxation. Therefore, the ego experiences "leaving the body" and then explores physical reality and other realities with a "sensory system" that is clearly not the one possessed by the body, since the body remains behind while the ego roams other worlds.

Telepathy

The ability to know the thoughts or feelings of another person without a physical communication is not recognized by science, but it is possible within the CIP framework. When the egos are completely identified with their bodies, they believe they can communicate only physically. When physical communication is impossible, telepathy would allow self A** or the ego of self A** to communicate with the ego of self B**, bypassing the normal body-to-body communication (Figure 8.1). In this case, A** could communicate directly with B** using I-space symbols, and that information would immediately appear as an intuitive thought and/or an empathic feeling within the ego of

B**. Notice that the ego of B** would be a *passive* receiver of information sent by either A** or the ego of A**.

The initiative for the communication may come directly from A**, who needs to communicate with the ego of B** without necessarily involving its ego. Another possibility is when the ego of A** has a strong desire to communicate with the ego of B** but their bodies (A* and B*) are not physically able to communicate. In this case, a strong desire of the ego may *activate* the direct communication from the ego to its vaster self A**, inviting A** to intervene.

Clairvoyance and Precognition

I think of clairvoyance in general as the ability to gain information about the world by extrasensory means, including retrocognition, remote viewing, and precognition, depending on the temporal origin of the information. Here I will highlight *precognition* because it is conceptually the most challenging.

If the universe obeyed deterministic classical physics, precognition would not violate any physical law, though it would require solving impossibly complex equations with unknowable initial conditions. But precognition deals with predictions that are generally outside the reach of science, even in principle. For example, a precognition like “There will be a car accident at a specific place and time, and person X will die” cannot be made by bottom-up physics. Within the CIP framework, however, such a precognition is possible as long as it does not violate free will. This is so because the egos are directly connected with their vaster selves, who in turn can communicate with each other using I-space symbols, as discussed earlier in connection with telepathy. Clearly, only certain classes of phenomena are predictable and thus precognitively knowable by egos—for example, those that have been *prearranged at the mental level* by agreement of all the selves involved.

Following is an example of a possible precognition scenario. Imagine that a high-level self (P**) communicates an unpredictable idea to the brain of an inventor (P*) in an intuitive flash. P* later decides to pursue the idea and begins its development in secret. When P* has firmed up his schedule and is about six months away from public disclosure, P** may communicate to a third person (Q*) a detailed description of the invention and the date on which it will be disclosed. This precognition, engineered by P** without violating the free will of either P* or Q*, will likely be correct.

Within the CIP framework, free-will choices are completely creative and cannot be known in advance even by the vaster selves. This is a complex subject because the nature of time within CIP is not the same as that described by various physical theories. What time really is remains an unsolved puzzle in physics.

Psychokinesis

This class of phenomena is hard to explain, given free will, the constraints of physical laws, and the intersubjective nature of psychokinetic events. Changing or suspending the laws of physics is impossible within current physics. Not so within the CIP framework because physical laws are *agreements* among the hierarchy of selves who cooperatively, voluntarily, and collectively create and evolve physical reality. However, for a psychokinetic event to occur, all the selves affected by it must give their permission—perhaps even cooperate—to make it possible. If that is the case, provided no free will is violated, the laws of physics may be temporarily and locally “bent” and their effects circumscribed. At least in principle, psychokinesis should be possible, although how it could be done in practice is not yet clear.

A full explanation of any of the rogue phenomena discussed in this section would require many more details to be filled in. Nonetheless, I believe enough has been said to show that the CIP framework can, in principle, accommodate with conceptual ease most (if not all) of them.

CONCLUDING REMARKS

The more we identify with our body and with our mechanical mind—and thus pay attention only to the symbols produced by the body—the more we lose contact with our deeper inner reality. Our ancestors who wrote the Vedas nearly four thousand years ago said something similar based on inner experiences and reflections like the ones discussed in this chapter. And the same deep message has been repeated in the various civilizations that have arisen ever since.

The materialist and reductionist vision of the world that dominates the *Weltanschauung* of our time considers the message of the Vedas the naive result of the pious desire of man for immortality, the ignorant and illusory attempt to be more than our body. By accepting only physical reality, much of our society has closed itself off to the possibility of experiencing the deeper truth that connects us all, for the simple reason that if a person believes certain experiences are impossible, the necessary investment to explore them will never be made.

Within the CIP framework, the fundamental purpose of One is self-realization in the endless pursuit of self-knowing. The fact that we are conscious is circumstantial evidence that consciousness may be purely quantum and that the body may be a mixture of classical and quantum organizations in which a unified quantum core can interface with the domain of consciousness on the one end and with the domain of classical physics on the other.

“Mind” (meaning) and “matter” (symbols) are two coevolving indivisible aspects of the dynamic and holistic “substance” of One. And One comes to know its true nature reflected in the ever more complex forms of the live coherent symbols created to capture the infinitely deep inner structure of its

own self-knowing. Since any symbol is finite, it will be impossible to fully capture symbolically the potentially infinite knowing of One. No matter how much One knows itself, it will never reach the end of its potential infiniteness.

I have come to believe the hypothesis that life is the symbolic-semantic expression of this eternal search for truth of One. And the life that we know can be only one of a nearly infinite number of diverse life-forms in existence.

Just as the invention of the steam engine amplified our human muscular power, so computers, robots, and artificial intelligence will amplify our mechanical intellectual power, freeing us from monotonous, repetitive, and dangerous jobs and extending our reach where it matters. This great potential, however, must be placed at the service of humanity's spiritual, mental, emotional, and physical progress.

Before us, the mystery of life and consciousness is opening with the amazing possibility of learning how to explore the universe of light that each one of us senses within. The human journey in the information era has just begun. If this venture is illuminated by love, discipline, passion, curiosity, and courage, we will learn to use the only tool capable of exploring the universe of live symbols and the true meaning of the multiverse. This incredible instrument is our birthright. Its name is consciousness, and it is what comes first.

NOTES

1. Cicero (1972, p. 132).
2. For further details, see D'Ariano and Faggin (2020).

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III

FURTHER HORIZONS IN SCIENCE, THE HUMANITIES, AND PHILOSOPHY

EXPANDING A SCIENCE OF CONSCIOUSNESS

David E. Presti

Science cannot solve the ultimate mystery of nature. And that is because, in the last analysis, we ourselves are part of nature and therefore part of the mystery that we are trying to solve.

—Max Planck, *Where Is Science Going?*¹

There does not exist anything
That is not dependently arisen.

—Nāgārjuna, *Mūlamadhyamakakārikā*²

A close friend told me he had recently been going through materials stored in his garage—including several boxes that had been unopened and gathering dust for decades. Deeply buried at the bottom of one of the boxes was a sheaf of letters from a one-time girlfriend. She was someone he had known closely during several months spent living in Europe, and they had kept in touch via letter for a short time after my friend returned home to the United States. That was nearly fifty years ago, and they had had no contact since. On looking through the letters, my friend's thoughts were for the first time in decades focused on his old friend. The next day, he awoke early in the morning and saw first thing that he had received a message via social media from this former girlfriend. She indicated that she had the previous day, herself, uncovered old letters exchanged between them nearly five decades ago, had looked my friend up online and found his contact information, and was reaching out to say hello. My friend told me this was the most uncanny experience he has ever had.

Another friend, now in her mid-nineties, has sporadically had what she calls “ESP experiences” since she was a teenager. For much of her life, she has avoided talking about these experiences. Only recently, in part responding to encouragement from friends, has she begun to talk and write about these occurrences. One time, she knew that a family member (living at a distance from her) had died just at the time he passed, although the death had not been expected. She had multiple detailed clairvoyant experiences (later confirmed) of significant events occurring in the lives of close relatives—primarily her children and siblings. And several times she found herself unbidden in “conversation” with someone who was deceased. The deceased person was sometimes someone she knew in life, and sometimes it was someone with whom she had not previously been familiar, but she was later able to verify the accuracy of material revealed in the conversation. The most vivid of these experiences occurred during a meditation retreat when an unknown woman appeared in my friend’s bedtime mental reverie, speaking at length about various things. When asked, the visitant said she was the wife of the man sitting next to my friend in the retreat. My friend and this man had not spoken, and they knew nothing of one another’s lives. The next day, my friend told the person leading the retreat of her experience and was informed that her description matched that of the recently deceased (three months prior) wife of the person sitting next to her. My friend’s ESP experiences have several times occurred in conjunction with meditation retreats. She comes from a family of scientists and other distinguished academic scholars, and none of her family wished to hear about such experiences. On one occasion, her father, a philosophy professor, listened and then muttered, “Wishful thinking, wishful thinking.”

Wishful thinking: thus we have the conventional presumed-to-be-science-based response to such stories. Experiences such as these are explained as coincidences or, moreover, merely meaningless coincidences. How many times does one think of someone and nothing happens? We recall only those events when something like what is described above takes place and forget myriad others. Or perhaps we incorrectly construct the time sequence of events afterward so that we mistakenly think our experience came before the event rather than the other way around. (For example, one learns about someone’s death and then mistakenly remembers, thinking that a premonition occurred prior to when they learned about the death.) Or science does not support taking such anecdotes as reliable data. And, finally, the definitive repudiation: our science-based model of reality does not allow for the occurrence of such things in any way other than being random and meaningless coincidences or mistaken memories; simply stated, anything else is *impossible*. Or the folks are simply not telling the truth—fabricating their stories, either wittingly or unwittingly. And so on. Such are the customary dismissive rejoinders.

However, if one is scientifically honest, such responses and conclusions are but hypotheses to be considered. Another very tenable hypothesis is this: there is an interconnectivity linking minds across space and time. That is, while we humans are living beings having physical bodies composed of atoms and operating according to physical principles that have become known to us through our scientific analyses to date, we are also connected with or part of an information-carrying medium as unknown to us currently as were electromagnetic fields to keen observers of the natural world such as Aristotle, Ptolemy, Galileo, and Darwin.

This is a well-defined and testable hypothesis that is consistent with the accepted facts of orthodox biophysical science. Furthermore, such a hypothesis can account for additional observational material (anomalies) such as are described in this volume, a great many other books, and thousands of publications stretching across centuries. There is nothing here that is beyond science, only beyond what is currently explicable within the presently embraced biophysical model of the world.

Science-derived explanatory models of the world three centuries ago could not account for gravitation. It was only with the advent of Einstein's general theory of relativity in 1915 that physicists came to accept that a satisfactory explanation for gravitation had been found. Nor could science-derived models of the world from three centuries ago fathom the possibility of nearly instantaneous transmission of information (e.g., voice and images) over distances of thousands of miles or predict the precise colors generated by electrical excitation of gases. It would take the introduction of electromagnetic fields and radiation (nineteenth century) and the development of quantum physics (twentieth century), respectively, to accomplish these things.

So, where are we in the present era with respect to the power of scientific theory to account for consciousness? Let's begin with some definitions.

Science: By *science*, I mean the process of developing and organizing knowledge about the world, the universe, and nature. Science derives from the Latin *scire*, "to know." The scientific method has come to mean a process of collecting data via observation and experimentation,³ guided by the formulation of questions and hypotheses, and further deepened by theoretical frameworks of "explanation" that endeavor to connect observations together in ever more elaborate networks. The result, we say, enhances our "understanding." While hypotheses and theories play important roles, at its foundation science is grounded in empiricism—from the Greek *empeirikos*, meaning "experience." The term originally referred to a school of ancient physicians who based their medical practice on observations and data from their own experience rather than on dogmatic theory.

Mind and Consciousness: By *mind*, I mean mental states consisting of thoughts, feelings, and perceptions. By *consciousness*, I mean *experience* or *awareness* of mental states. Consciousness is *irreducibly* experiential and subjective, part of *what it is like to be*. There are also mental states out of awareness, the unconscious aspects of mind. These states belong to and help constitute mind in that they have the potential to enter awareness. If that potential were not there, they would be considered not mental states but aspects of physiology that may impact our behavior but are not available to be experienced. Indeed, the vast majority of our mental life is typically not conscious, typically out of awareness. (One of the tasks of psychotherapy, as developed in Europe and the United States, is to bring unconscious mental material into conscious awareness, where it may be subjected to analysis and change. And one of the tasks of yoga, as developed in Asia, is to become ever more aware and conversant with all aspects of mind.) By these definitions, mind and consciousness have much in common, and indeed the two terms are often used interchangeably—the distinction between conscious and unconscious aspects of mind is set aside. In this chapter, I will use the terms interchangeably. The definitions stated here would be generally acceptable among scientists interested in these issues. However, others may adopt different definitions, including other authors in this volume.⁴

Also of note, these definitions of mind and consciousness are circumscribed and personal; they do not go beyond a person's own experience. However, some uses of these terms reference something more expansive—something transpersonal, transcendental, nonlocal, or universal. Is mind a phenomenon that makes sense only locally, in a very personal sense? Or is it a presence in the cosmos, perhaps even existing outside of or beyond the physical dimensions of space and time?

In this discussion of a science of mind and consciousness, we will adopt the more circumscribed, local, personal definition. Otherwise, the scientific conversation can get stuck right out of the gate. That said, the diversity of opinions concerning how to define consciousness reflects precisely the core issue paralyzing the science. That is, if one is open and honest about the empirical data, it is clear that what has been and continues to be experienced by a great many individuals over vast expanses of time goes beyond the personal as conceived within our current biophysical model of reality. This data can also include elements from the literature of a panoply of religious, shamanic, and mystical traditions—a gnosis or knowing, having many cross-cultural similarities, transcending attempts to explain it away (Grosso, 2020; Kripal, 2014, and Chapter 10 in this volume; Marshall, 2015). The empirical data point toward a consideration of mind going beyond the personal, beyond one's local brain and body and known channels of sensory information—hence

the common use of expansive qualifiers such as transpersonal, collective, transcendental, cosmic, or universal consciousness. Consciousness unbound.

In this chapter, I suggest reframing our science on the stage of a metaphysics that will enable movement toward a more powerfully explanatory science of consciousness. A central message of this volume is that a variety of metaphysical systems exist that can accommodate such an expanded science—neutral and dual-aspect and reflexive monisms and analytic idealism among them. We need not let our *assumptions* regarding metaphysical frames limit our capacity to expand a science of consciousness.

I have spent my life as a scientist and science educator. Childhood fascination with aspects of nature discovered in my suburban environment crystallized during college in the study of chemistry, physics, and mathematics. The beauty and elegance of science was an early love. By the end of college, I was also reading from the history and philosophy of science and about various spiritual, religious, and mystical traditions. One of my early scientific heroes was Albert Einstein, and I read every essay by him and biography about him that I could find. I wondered how he could sit in his room and concoct a mathematical theory describing the entire cosmos. How could anyone do that? What is the nature of the human mind, and how are we humans, as living conscious beings, related to what we take to be physical reality?

College was followed by postgraduate work in physics, biology, and psychology, and for the past three decades I have taught neuroscience at the University of California, Berkeley. I am deeply rooted in the landscape of science, and I love the elegance of so many of the observational and experimental paradigms, the stunning discoveries, and the beauty and explanatory power of so many of the theories. When I teach my introduction to neuroscience class to hundreds of undergraduate students in the largest lecture hall on the Berkeley campus, I frequently say that if I had my druthers, I would commission an artist to paint a mural of the periodic table of the chemical elements (one of the most beautiful organizational frameworks ever recognized or created by the human mind) on one wall and a phospholipid bilayer membrane (the elegant molecular configuration that forms the boundary of every cell of every life-form on Earth) on the other. Science has provided us with an awesomely beautiful structure by which we organize, understand, and explain the natural world.

MIND AND BRAIN

It is not uncommon to hear scientists say things like “mind is what brain does” or “the brain is the hardware and the mind is the software” or even “mind and

brain are the same.” What do such statements mean or imply? Abundant empirical evidence shows that mind (consciousness, experience) is intimately related to the physical structure and function of the body and, in particular, of the brain. The findings of nineteenth-century neurology documented correlation between the locations of brain lesions (revealed by postmortem examination) and behavioral changes exhibited by patients while they were alive. William James (1842–1910), a pioneer in the study of mind within modern science, pointed out the connection in his classic book *The Principles of Psychology*:

If the nervous communication be cut off between the brain and other parts, the experiences of those other parts are non-existent for the mind. The eye is blind, the ear deaf, the hand insensible and motionless. And conversely, if the brain be injured, consciousness is abolished or altered, even although every other organ in the body be ready to play its normal part. (James, 1890b, Vol. 1, p. 4)

Far more is now appreciated about the correlations between mental experience and brain structure and function: damage to the brain is associated with specific changes in perceiving, thinking, and feeling; specific chemical substances (psychoactive drugs such as stimulants, sedatives, psychedelics, and so forth) that enter the brain are associated with specific effects on mind; and neural activity of the brain—as measured by imaging technologies such as electroencephalography, magnetoencephalography, functional magnetic resonance imaging, and positron emission tomography—is correlated in specific ways with perceptions, emotions, and other aspects of mental experience. That there is an intimate relationship between mind and body is unquestioned (Presti, 2016). However, how this relationship comes about—how it is that physical processes taking place among the atoms, molecules, cells, and electromagnetic fields of the brain and body relate to the subjective experiences of mind, the so-called mind–body problem—remains a deep mystery.

Throughout the twentieth century, science greatly expanded in its explanatory power. However, for much of that time and for the centuries preceding it, the study of consciousness was largely avoided. Many held that consciousness was too vague a topic to be addressed by the methods of science. Moreover, consciousness is inherently subjective, and science, it was said, is about the objective world. In particular, early twentieth-century experimental psychology, working to establish its place as a science within academia, promoted the notion that study of the human psyche ought to stick solely with investigation of objectively observable behaviors—behaviorism.⁵ It would be roughly half a century before psyche (mind, consciousness, subjectivity, experience) was reintroduced into the domain of study in academic psychology, perhaps in the 1950s and 1960s via the newly forming interdisciplinary field of cognitive science. What, for the most part, has arisen since is a conception

of mind being perhaps reducible to computational processes—akin to computer algorithms—and ultimately emergent in some still completely unknown manner from the biology of the brain and body (biological naturalism). In this view, consciousness “is caused by brain processes and is itself a higher level feature of the brain” (Searle, 2000, p. 566; see also E. F. Kelly, 2007).

Confidence in this perspective has been augmented by the impressive explanatory power of molecular biology as it has developed in the decades following the discovery of the structure of DNA and the genetic code connecting sequences of DNA nucleotides to the amino acids from which proteins are constructed. What had been the great mystery of inheritance is now explained in precise molecular terms. These discoveries are regarded as pivotal events in the history of biology, catalyzing the formation of the new discipline of molecular biology and subsequent birthing of the biotechnology industry. The DNA structure and its ramifications were applauded in both scientific and popular culture as revealing something akin to “the secret of life.”⁶ This great success has likely contributed to the optimism that all phenomena of life—including consciousness—will ultimately yield to an understanding in terms of straightforward, albeit complex, underlying molecular properties.⁷

Physics and chemistry, and cellular and systems biology, underlie the discipline of neuroscience, and interest in this field is in part related to the idea that investigating the structure, function, and evolution of nervous systems and brains will help deepen our understanding of who we humans are as conscious living beings and how we are related to the rest of the physical universe. Thus, gradually, investigation of consciousness has become accepted as a legitimate domain of study within neuroscience. This acceptance was facilitated in part by the involvement of the eminent physicist-turned-biologist Francis Crick (1916–2004), codiscoverer of the double-helical structure of DNA and of the genetic code. Crick (1966) came to view consciousness as the great remaining mystery of biological science, and, in a paper coauthored in 1990 with his colleague Christof Koch, a program was outlined to explore consciousness by addressing its presumed neural basis:

It is remarkable that most of the work in both cognitive science and the neurosciences makes no reference to consciousness (or “awareness”), especially as many would regard consciousness as the major puzzle confronting the neural view of the mind and indeed at the present time it appears deeply mysterious to many people. This attitude is partly a legacy of behaviorism and partly because most workers in these areas cannot see any useful way of approaching the problem. . . . We suggest that the time is now ripe for an attack on the neural basis of consciousness. Moreover, we believe that the problem of consciousness can, in the long run, be solved only by explanations at the neural level. (Crick & Koch, 1990, p. 263)

Since that time, a very large number of investigations into neural correlates of various aspects of awareness have been conducted (Koch, Massimini, Boly, & Tononi, 2016)—contributory to expanding knowledge about brain structure and function. Nonetheless, such a program, I maintain, while continuing to generate knowledge about neural correlates of mental experience, will not go beyond this—will not take us to a place of substantially expanded insight into the nature of the great mysteries of consciousness. Even Koch (2012), who continues to be a leading neuroscientist in the study of consciousness, has more recently come to something like this conclusion:

I used to be a proponent of the idea of consciousness emerging out of complex nervous networks. . . . But over the years, my thinking has changed. Subjectivity is too radically different from anything physical for it to be an emergent phenomenon. . . . This point of view does come with a metaphysical cost many are unwilling to pay—the admission that experience, the interior perspective of a functioning brain, is something fundamentally different from the material thing causing it and that it can never be fully reduced to physical properties of the brain. . . . I believe that consciousness is a fundamental, an elementary, property of living matter. It can't be derived from anything else. (p. 119)

Implicitly adopted here is a form of panpsychic metaphysics, positing consciousness as a fundamental aspect of the world, not reducible to neural processes. Nonetheless, for most scientists interested in consciousness, work will continue to be accomplished solely via investigation of neural correlates, and in that lies what I view as a key obstruction in conceptualizing a science of consciousness more expansively. What is holding us there? Let's step back and look at the larger historical picture.

THE BACKSTORY OF CONTEMPORARY SCIENCE

Modern science began its development four centuries ago—during what has been called the first or original scientific revolution (Kuhn, 1957, 1962/1996)—in the time of Copernicus, Kepler, and Galileo. The idea developed that observed phenomena could be interpreted in terms of something akin to mechanical actions in a universe existing external to us, the observers. René Descartes (1596–1650) articulated the separation clearly, describing the domain of science to be that of the material world (*res extensa*), including the physical body. Mental phenomena (*res cogitans*)—thoughts, feelings, conscious awareness, subjective experience, the locus of the human soul (whatever that might mean)—were the domain of the spirit, falling outside the purview of physical science and perhaps within the purview of religion. This

split of mind from the world and from the body was done in part to protect the project of science from influence by religious institutions. At the time Descartes (a Frenchman living in the Netherlands and a devout Catholic) was writing on the subject, he was well aware that Galileo (another devout Catholic) was suffering censure at the hands of the Catholic Inquisition in Italy. Moreover, the early development of modern science was embedded within the culture of sixteenth- and seventeenth-century Europe, at the dawn of the so-called Age of Enlightenment. As Paul Marshall points out in Chapter 11 in this volume, this was “a transition as much social and political as intellectual.”

Science enjoyed remarkable progress in the centuries that followed: astronomy, physics, chemistry, geology, and biology all flourished in their capacity to organize observations into beautifully coherent explanatory frameworks. Along the way, there have been a handful of major revolutionary turning points—occasions at which our frameworks of explanation dramatically shifted: heliocentric cosmology, wherein the sun replaced Earth as the center of our local cosmos; biological evolution, which holds that all of life on Earth is intimately related via processes of variation and selection taking place over vast stretches of time; relativity physics, in which the once static backdrop of space and time becomes malleable and subject to transformation by the relative motion of observers and the presence of mass and energy; and quantum physics, wherein the very fabric of physical reality becomes fuzzy and seemingly dependent on acts of observation, the interpretation of which continues to confound physicists a century after its development.

And there have been any number of smaller revolutions: recognition that Earth is very old, discoveries regarding the identity and stability of chemical elements and the conservation of matter, the introduction of electromagnetic fields in physics, plate tectonics and continental drift in geology, the molecular description of the exquisite information-coding capacities of living cells, and appreciation of the increasingly vast and dynamic nature of the universe.

In all this, as made explicit by Descartes, the focus has been on describing a physical world as it appears to us—treating the world as if it exists objectively, independent of our experience. Within this framework, there has developed an elegant narrative, an origin story and its developmental trajectory: the cosmos originating with a Big Bang; the coalescing of the fundamental units of matter as described in the Standard Model of particle physics; the formation of hydrogen and the synthesis of the chemical elements in evolving stars and exploding supernovae; the formation of planetary solar systems around a great many stars, together with the existence of a large number of planets exhibiting conditions conducive to the production and stability of specific molecules; and the coming together of certain of these molecules into structures able to utilize energy to maintain stability, store information, and

replicate. We call this latter phenomenon *life*. All this, of course, is believed to have taken billions of years. It is a beautiful narrative—and powerfully explanatory—down even to a great many details.

After several billion more years, at least here on Earth, life changes, evolves, by processes of variation and selection, and the great diversity of living organisms (and viruses) that we now observe is the result. We humans, along with our capacities, are understood as part of this grand explanatory scenario. Although some big mysteries remain—the most notable of which are the emergence of life from nonliving matter and the emergence of sentience within life—there is confidence among many (perhaps nearly all) scientists that a complete explanation of life and mind will be found within something similar to our present metaphysical framework and its corpus of physical laws.

WHERE DOES MIND FIT IN?

In the narrative just outlined, the presence and role of mind have been ignored. Mind is considered a latecomer to the story, a capacity for experience that seems to show up well along in the process of biological evolution, appearing mysteriously as some sort of “emergent property” of complex nervous systems. Indeed, it has worked well, it seems, to ignore mind, given that the focus of scientific endeavor has been stars, planets, rocks, oceans, matter and its transformations, atomic nuclei, plants, animals, and—at least for a while—even our own bodies. However, as soon as we attempt to use scientific methodology to investigate the nature of mind, the issue becomes apparent. How can we account for subjective (mental, conscious) experience in terms of objective physical matter and energetic interactions within the brain and body? How might mind have causal effects on matter, or is mind an epiphenomenon, lacking in causal impact? These are facets of the so-called mind–body problem. All who have reflected on the mind–body relationship have concluded that it presents, to say the least, a very difficult problem (Nagel, 1974). Indeed, how subjective experience is related to brain and body physiology has been termed the “hard problem of consciousness” (Chalmers, 1995). As philosopher Thomas Nagel (1974) stated nearly fifty years ago, “Consciousness is what makes the mind–body problem really intractable” (p. 435).

What can be said as to where the limitation, the intractability, is? I maintain that it is a worldview limitation—a limitation of vision, of the playing field, of an agreement we have made about what is possible—and *not* a limitation

of science writ large. In contemporary science, we operate within a metaphysical frame—a worldview—where all of what we call “reality” is conceived as constructed from matter and its interactions as described by mathematical laws of physics. This worldview has enjoyed enormous success in accounting for what we observe—and underlies all of our modern technology and our capacity to seemingly understand and even exert control over nature (e.g., space travel, genetic engineering, antibiotics, vaccines, nuclear energy).

Within this worldview—which in philosophy is called *physicalism* or *physical materialism* or *materialism*—there is a necessity that consciousness be explained in terms of the properties of matter. For what else is there? However, within such a metaphysical framework, the mind–body relationship will always be a problem—consciousness being irreducibly subjective and experiential, very different from matter conceived as existing objectively, not in any way dependent on our experience of it. This is precisely what makes the mind–body problem hard and, some (including me, as I have come to appreciate) would say, impossible, at least within a strictly physicalist framework. If we wish to evolve our science of consciousness, it is time to stop letting metaphysical *assumptions* block its expansion.

Science has flourished over the past several centuries by focusing on organizing observations of the world—the world as it appears to us. We notice patterns and regularities, and we develop frameworks through which we understand or explain the patterns and regularities as aspects of an external, objective, “real” world—a world that is assumed to exist independently of our awareness of it. While the existence of an objective world external to us is assumed and reified, we come to know this world only via our consciousness, our experience. *All we truly know is our experience.* And from this experience, we draw conclusions about the existence of an objective world. *World exists within mind.*

Moreover, we understand the nature of our body and brain, and who we are and our place in the world, as part of a long process of physical and biological evolution governed by physical laws—Big Bang, stars and galaxies, chemical elements, solar systems, life—and then in some still mysterious manner, an experiential aspect of being also arises. Consciousness. *Mind exists within world.*

World exists within mind. Mind exists within world. There is a mutual enfolding of mind and world. This interdependence, this dependent arising, appears inextricable. Appreciating and accepting this, how might we move forward in expanding a science of mind, now within a metaphysical framework which allows that mind may be ontologically more than a derivative of matter? Nothing need be given up except our reluctance to consider the nature of consciousness more expansively and empirically (see Marshall’s discussion

of Broad's Basic Limiting Principles in Chapter 11 in this volume)—thereby allowing for the possibility of consciousness unbound.

One hundred and thirty years ago, William James (1892) addressed the future development of a science of mind:

A genuine glimpse into what it is would be *the* scientific achievement, before which all past achievements would pale. But at present psychology is in the condition of physics before Galileo and the laws of motion, of chemistry before Lavoisier and the notion that mass is preserved in all reactions. The Galileo and the Lavoisier of psychology will be famous men indeed when they come, as come they some day surely will, or past successes are no index to the future. When they do come, however, the necessities of the case will make them “*meta-physical*.” Meanwhile the best way in which we can facilitate their advent is to understand how great is the darkness in which we grope, and never to forget that the natural-science assumptions with which we started are provisional and revisable things. (p. 468)

James anticipated that developments in the scientific exploration of mind would eventually become truly revolutionary, eclipsing all prior scientific achievements in impact—and that the program would likely entail revision of metaphysical assumptions and the known physical laws. The next really big scientific revolution may encompass both mind science and physical science, interconnecting the two domains in new and unexpected ways. One hundred and thirty years ago, James anticipated a major scientific revolution in the development of a science of mind, and his words are all the more true today. How might we operationalize ways to contribute to the orchestration of this revolution?

MOVING FORWARD WITHIN AN EXPANDED FRAMEWORK

I offer here several suggestions of ways to turn the wheel in the direction of that revolution. In summary, (1) adopt a more expansive metaphysical frame, (2) radically expand empiricism, (3) connect with fundamental physics, (4) look at mind–body medicine and expectation (placebo) effects, (5) cultivate dialogue and collaboration with spiritual traditions.

I: Adopt a More Expansive Metaphysical Frame

Recognize that mind and world may be enfolded and interdependent in ways that our current metaphysical frame simply cannot accommodate. There is no reason to believe, as an axiomatic assumption, that they can be separated, as is the case in our contemporary physicalist metaphysics—wherein mind

is explicitly split off from investigation, following the lead of founders of modern science. While this assumption of separation has worked well as long as the focus of investigation has been the outer world, there is scant reason to assume it will continue to work when the focus of investigation is mind and perhaps even the body. Indeed, such a metaphysical assumption places severe limits on our science, and these limitations are precisely in the domains relevant to developing a science of consciousness. With new metaphysical openness, there are several places within contemporary science that may constitute signposts for how to move forward.

2: Radically Expand Empiricism

Take all empirical data having direct relevance to investigation of mind seriously—a radically expanded empiricism.⁸ In 1890, the same year his epic *Principles of Psychology* saw publication, James authored an essay in *Scribner's Magazine* (1887–1939), a monthly popular intellectual journal that has been compared to the modern-day *Atlantic* and *Harper's* magazines. Much of James's essay reflects on the recently published doctoral thesis of Pierre Janet (another pioneer in expanding the scientific study of mind), and James made connections between Janet's observations emerging out of nonordinary states of consciousness associated with so-called hysterical disease states and the developing "psychical research" program of Frederic Myers,⁹ Edmund Gurney, and others. These kinds of studies were all believed to reveal otherwise hidden aspects of mind. A further connection highlighted by James centered on this idea: to expand a science of mind, one must take seriously the occurrence of relevant empirically verifiable phenomena that do not fit within the standard accepted explanatory paradigm—the anomalies.¹⁰ In James's (1890a) original prose,

"The great field for new discoveries," said a scientific friend to me the other day, "is always the Unclassified Residuum." Round about the accredited and orderly facts of every science there ever floats a sort of dust-cloud of exceptional observations, of occurrences minute and irregular, which always proves less easy to attend to than ignore. The ideal of every science is that of a closed and completed system of truth. The charm of most sciences to their more passive disciples consists in their appearing, in fact, to wear just this ideal form . . . when a consistent and organized scheme of this sort has once been comprehended and assimilated, a different scheme is unimaginable. . . . Phenomena unclassified within the system are therefore paradoxical absurdities, and must be held untrue. When, moreover, as so often happens, the reports of them are vague and indirect, when they come as mere marvels and oddities rather than as things of serious moment, one neglects or denies them with the best of scientific consciences. . . . Anyone will renovate his science who will steadily

look after the irregular phenomena. And when the science is renewed, its new formulas often have more of the voice of the exceptions in them than of what were supposed to be the rules. (p. 361)

James was thinking of historical scientists such as Galileo and Darwin, who struggled with trying to understand observations that didn't fit the prevailing paradigms of their day. Perhaps even more startling examples were soon to come: Einstein and the anomalies that presaged both the special and the general theories of relativity and the inexplicable observations within physics and chemistry that were rendered explainable only with the advent of quantum physics.

James (1890a) then draws specific attention to some of the topics of the present book:

No part of the unclassified residuum has usually been treated with a more contemptuous scientific disregard than the mass of phenomena generally called *mystical*. Physiology will have nothing to do with them. Orthodox psychology turns its back on them. Medicine sweeps them out; or, at most, when in an anecdotal vein, records a few of them as "effects of the imagination," a phrase of mere dismissal whose meaning, in this connection, it is impossible to make precise. All the while, however, the phenomena are there, lying broadcast over the surface of history. (pp. 361–362)

He referred to the unclassified, perhaps mystical,¹¹ residuum as "wild facts" (p. 362). A few years later, he would even more poetically reference them as among the "wild beasts of the philosophical desert" (James, 1909, p. 330). Among other terms that have been applied to the wild facts in the time since James are "anomalous," "rogue," "irregular," "paranormal," "psychical," and "excluded." I never cease to be amazed at how insightful James was in articulating what was important—*essential*, actually—to expanding a science of mind. We would do well to simply take his words as a guide and pick up right where he left off more than a century ago.¹²

Thus, more study of what James categorized as the wild facts is essential. While often assumed to be infrequent in occurrence, it is likely they are common though frequently not attended to—broadcast over the surface of present history as well, and paranormal only by virtue of their being beyond our capacity to explain within our current framework of biophysical science (Cardeña, 2018; McLuhan, 2010/2019; Radin, 1997; Sheldrake, 2012; Wargo, 2018). Laboratory studies of phenomena like telepathy, clairvoyance, psychokinesis, and precognition are helpful and may be revealing, but the most robust examples of these phenomena tend to be spontaneous occurrences, often associated with death, near-death, and other emotionally powerful (often traumatic) events (the examples that opened this chapter; Kelly

et al., 2007; Kripal, 2019; Presti, 2018; Greyson, Chapter 1 in this volume; Tucker, Chapter 2 in this volume). Here we must take what is given by nature, for such emotionally evocative circumstances simply cannot be created in laboratories or other well-controlled settings.

Such a program also opens space to accommodate things known from our most sophisticated religious, spiritual, and mystical traditions. Stories of seemingly miraculous happenings of various sorts, blurred by fuzziness of historical report and conditioned by the cultures from which they emerged, may nonetheless be based on experiential fact (Grosso, 2016, 2020; Kripal, 2014). Transformational technologies drawn from shamanic cultures, contemplative practices such as are found in the mystical branches of many religious traditions (Tantric Buddhism and Hinduism, Islamic Sufism, Judaic Kabbalah, and so on), and powerful nonordinary states of consciousness associated with psychedelic plants, fungi, and molecules may provide ways of entering this territory in more predictable ways (Harner, 1980, 2013; Kelly & Locke, 1981/2009; Luke, 2020; Presti, 2017; Vieten et al., 2018).

With the reopening of clinical and basic scientific research with psychedelics (Lattin, 2017; Pollan, 2018), there will be opportunities to investigate how these powerful medicines reveal aspects of mind not generally accessible. Indeed, the word “psychedelic”—coined in 1956 by psychiatrist Humphry Osmond (1957)—means “mind revealing,” specifically highlighting this property of these powerful medicines. In manifesting otherwise hidden aspects of mind, psychedelics offer doorways to other ways of knowing, ways that may provide access to wild facts. This is certainly how many indigenous shamans describe their work with psychedelically active plants and fungi (Furst, 1972; Harner, 1973; Schultes, Hofmann, & Ratsch, 1979/2001).

At present, scientific research with psychedelics is focused largely on quantitatively establishing their clinical efficacy in the treatment of depression, anxiety, addiction, and posttraumatic stress disorder; on using brain-imaging technologies to measure neural correlates of psychedelically occasioned states of consciousness; and on *in vitro* and nonhuman animal investigations of molecular and cellular actions in the nervous system. These latter types of neuroscientific investigations are things we know how to do. However, in studying only neural correlates and biochemical actions, we run the risk of engendering an illusion of understanding—a belief that we understand more about the actions of these powerful substances than we actually do. Our scientific investigation of psychedelics is very new; however, a great deal of knowledge about the use of these substances comes to us via far older and well-developed shamanic traditions having worldviews very different from our own—often worldviews within which the existence of what James called the wild facts is accepted.

William James spoke frequently about mystical experiences and other nonordinary states of consciousness as important sources of information regarding the nature of mind. His thinking in this domain was influenced by his experience with nitrous oxide, a psychotropic gas (having psychedelic properties) that came to his attention in the 1870s. James (1882) described his personal experience in an essay published in the philosophy journal *Mind*:

The keynote of the experience is the tremendously exciting sense of an intense metaphysical illumination. Truth lies open to the view in depth beneath depth of almost blinding evidence. The mind sees all the logical relations of being with an apparent subtlety and instantaneity to which its normal consciousness offers no parallel. (p. 206)

Twenty years later, when James delivered the Gifford Lectures at the University of Edinburgh, his experiences with nitrous oxide remained of great importance. His comments at that time are among the most eloquent and frequently cited passages ever written about nonordinary states of consciousness:

One conclusion was forced upon my mind at that time, and my impression of its truth has ever since remained unshaken. It is that our normal waking consciousness, rational consciousness as we call it, is but one special type of consciousness, while all about it, parted from it by the filmiest of screens, there lie potential forms of consciousness entirely different. We may go through life without suspecting their existence; but apply the requisite stimulus, and at a touch they are there in all their completeness, definite types of mentality which probably somewhere have their application and adaptation. No account of the universe in its totality can be final which leaves these other forms of consciousness quite disregarded. How to regard them is the question,—for they are so discontinuous with ordinary consciousness. Yet they may determine attitudes though they cannot furnish formulas, and open a region though they fail to give a map. At any rate, they forbid a premature closing of our accounts with reality. (James, 1902, p. 388)

During James's lifetime, a schism developed between those (such as himself) who believed that investigation of anomalous experience was essential to a science of mind and other influential figures in American psychology who feared that associating the study of psychical phenomena (the wild facts) with the study of "normal" human behavior ("the accredited and orderly facts") would damage the acceptability of their field as a legitimate science within academic institutions (Sommer, 2012). The opposition in academia continues to this day and is often voiced with hostile emotional intensity—dogmatic dismissiveness from members of the scientific community and sometimes from the academic humanities as well (Kripal, 2019, and Chapter 10 in this volume; Leary, 2011).

What are some of these criticisms, and how can they be addressed? One is that the study of anomalous cognition (the wild facts) is not “real science”; rather, it is so-called pseudoscience, an endeavor that masquerades as science but does not adhere to normal standards of scientific investigation. Such criticisms generally come from individuals who have not taken the time to actually look into the parapsychological literature. If one does, one cannot help but be impressed by the extent and quality of this body of work. Case reports are often rich in detail, and they are documented and verified to the greatest degree possible. Parapsychological researchers may well be among the best experimentalists in human behavioral science “because they know that they must design more sophisticated, bias-proof studies than scientists in other fields in order to be believed” (Leary, 2011, p. 276). Statistical analyses, when possible to conduct, often equal or surpass in significance many results from investigations of conventionally accepted phenomena. Here is Jessica Utts (2016) in her presidential address to the American Statistical Association several years ago:

The data in support of precognition and possibly other related phenomena are quite strong statistically, and would be widely accepted if they pertained to something more mundane. Yet, most scientists reject the possible reality of these abilities without ever looking at data! . . . I have asked the debunkers if there is any amount of data that could convince them, and they generally have responded by saying, “probably not.” I ask them what original research they have read, and they mostly admit that they haven’t read any! Now there is a definition of pseudoscience—basing conclusions on belief, rather than data! (p. 1379)

Another important factor behind the intensity of the distress evoked by investigation of anomalous cognition is that mechanisms by which such phenomena might come about are not in any way understood. Science is in part driven by the development of underlying theories that provide an appealing reductionistic narrative—an explanation or understanding—of observed phenomena. This appears to provide a sense of security—supporting a belief that we actually understand the nature of reality—and endowing that reality with a kind of solidity, stability, and predictability.

This is despite the fact that quantum physics, the most fundamental description of the physical world we have, paints a variegated, fuzzy, and indeterminate picture of an underlying reality—abstract energy fields coalescing into particles, fluctuating spacetime quantum foams, virtual particles appearing and disappearing from empty space filled with vacuum energy, and mathematical stringlike structures vibrating in spaces of ten or more dimensions. Physicists speculate and argue about what happened during the first trillionth of a second after the Big Bang and are comfortably intrigued by what appears

to be five times as much undetectable “dark matter” in the universe as there is ordinary matter from which we—and the world of our everyday experience—are made. Going to great lengths to look for the enigmatic dark matter, they wonder whether it is composed of hypothetical WIMPs (weakly interacting massive particles), axions, or some other as-yet-unimagined form of material particle—or whether something else completely different and unanticipated is going on. And then there is the mysterious accelerated expansion of the cosmos, which has led to accepting that 70 percent of the universe’s energy content consists of so-called dark energy.

All these exemplify deep mysteries about the nature of physical reality, and they intrigue and engage the scientific community, resulting in innovative and collaborative investigational projects. Beautiful science. Thousands of scientists and billions of dollars are devoted to looking for signs of vibrating stringlike structures, virtual particles, Higgs bosons, WIMPs, and measures of the expansion of the cosmos. And yet all these phenomena—as fundamental as they are to our understanding of physical reality—are so far removed from the daily experience of most of humanity that discovery or nondiscovery related to any of these things means very little to most of the population. That is, whatever the uncertainty implied here about the nature of physical reality, it is too distant and abstract to be potentially upsetting. Furthermore, there is an implicit belief that eventually, with more investigation, science as we currently conduct it will figure it out—that it will be understandable in terms of a mathematically elegant physical theory. There is something about knowing that the mathematical framework is there or potentially there—even if it is beyond most people’s (including most scientists’) capacity to grasp—that provides something that feels like a comforting grip on reality, even though that reality may come down to mathematical abstractions describing fuzzy, nonlocalizable field-particle stringlike vibrations.

However, experiences of anomalous phenomena (telepathy, precognition, clairvoyance, synchronicities) fall within the realm of one’s personal life. If the material universe is enfolded with mind, this idea comes very close to home—as close as it possibly could: our consciousness. This is not a distant abstraction, like dark matter, dark energy, and Higgs bosons. The wild facts really matter on a very personal level. They threaten our worldview. They shake us up. If one is able to expand one’s worldview to accommodate such new data, this experience can be liberating. However, if one remains attached to and constrained by a seemingly inadequate and rigid physicalist framework, the result can be discomfort and fear. This may be one of the more salient factors in the resistance to and exclusion of the wild facts.

In our current physicalist worldview, there is no place for a mind that really matters—and there is fear in letting go into a worldview where mind

is a more central aspect of reality, where what we think may matter more than what we presently believe could be the case. Not that the fear isn't warranted, for this can be tricky and even dangerous terrain. Sorcery occurs within the world's shamanic traditions (Harner, 2013; Kelly & Locke, 1981/2009). And the disabling condition of psychosis may in some circumstances be conceptualized as inhabiting precisely that terrain in which the enfolding of mind and world is experienced, but experienced in a way that is destabilizing and detrimental to an individual's well-being. In such a psychosis, there is insufficient psychological grounding (lack of inherent stability stemming from a variety of factors: biological, developmental, and unknown)¹³ to contain the experience, and distress and suffering are the result rather than freedom from distress. Sometimes psychosis is a life-long condition limiting one's capacity to function in society, sometimes it is transient, and some transient cases can be conceptualized as *spiritual emergencies*—a shaking up of worldview accompanied by mental distress and behavioral dysfunction that is ultimately negotiated and resolved to yield degrees of liberation (including increases in measures of positive emotion, compassion, and connection with others) (Grof, 2019, especially Vol. 1, pp. 313–354; Grof & Grof, 1989; Lukoff, 2019).

As a society, we may need to undergo—or perhaps are already undergoing—a collective spiritual emergency to catalyze the transformation of the physicalist worldview to one that will allow for an expanded science of consciousness. There is something to be said for the idea that humanity is at present in the midst of a collective psychosis—a massive and disabling confusion concerning what is “real.” The way forward is to cultivate the ground—our sources of stability and strength—and I argue that the framework and methods of science are, in fact, a central aspect of this ground. We only need expand our metaphysical perspective to better accommodate the study of mind.

3: Connect with Fundamental Physics

Much of our experience of the world in daily life is interpretable in terms of classical (Newtonian) physics. However, at the beginning of the twentieth century, classical physics proved unable to account for the observed interactions of electromagnetic radiation with matter as well as for the stability of atoms, and a new set of physical principles had to be developed. This new physics, quantum physics, is now universally accepted as the most comprehensive known description of the behavior of matter and energy. And quantum physics indicates that the behavior of matter and energy is very weird indeed. For example, a particle of matter, such as an electron, seemingly exists in many states and places simultaneously—a situation described by a quantum-mechanical

wave function, a mathematical construct assigning probabilities to various alternative possibilities. Nonetheless, we experience reality as actualities, not potentialities—electrons, protons, atoms, and molecules, for example, having actual locations in space and time. How this transition from potential to actual comes about is called the *measurement problem* in quantum physics. It is vigorously debated among physicists interested in the foundations of quantum physics—what physics has to say about the nature of an objective physical reality and our ability, through experiment and observation, to acquire knowledge about it. There are many opinions among physicists, some strongly held, but there is no consensus save for an appreciation that a deep mystery of interpretation exists. Furthermore, it is a compelling hypothesis that the participatory experiential role of the observer/experimenter *cannot* be removed from understanding what quantum physics says about the world (Presti, 2019; Rosenblum & Kuttner, 2006/2011; Stapp, 1993/2009, 2007/2011). That is, the measurement problem in quantum physics may be another sign—now appearing within a well-established domain of fundamental physics—indicating interdependent enfolding of mind and world.

The issue of measurement was appreciated early on in quantum physics and debated among some of the founders—particularly Einstein and Bohr. It required a few more years before Einstein and colleagues proposed an experiment that presented another profound weirdness—that a measurement performed on one member of a pair of particles that had previously interacted and then gone their separate ways will instantaneously impact the state of the other member of the pair, no matter how far distant the two particles may be when the measurement is made (Einstein, Podolsky, & Rosen, 1935). This phenomenon came to be called “entanglement,” a term coined by Erwin Schrödinger (1935) a few months later. Several decades passed before it was possible to experimentally test for entanglement, but it has now been empirically established as another deeply weird aspect of quantum physics. Einstein’s 1935 paper is now so frequently referenced that it is often abbreviated simply as EPR. Entanglement may represent another signpost marking the interdependent enfolding of mind and world.

There is also the widely discussed “incompleteness” of physics in that there is a disconnect between the two powerful theoretical frameworks of quantum physics and general relativity. For many decades, attempts have been made to bring them into correspondence with one another; yet so far this has not happened in a broadly accepted manner (Holt, 2006). Many of these attempts involve speculation about the existence of additional dimensions beyond the usual three dimensions of space and one dimension of time (Randall, 2005). Additional dimensions, if they are to be granted any physical reality, may offer the basis for an explanatory framework for all kinds of otherwise

inexplicable phenomena, including some or even all of the wild facts (Carr, 2008, 2015; Smythies, 1967, 2012).

And then there is the nature of time and how our concept of time is very much contingent on our experience of the world—our consciousness—and yet is also seen as a principal structural feature in physical theory. Here again, this situation likely represents another interdependent aspect of mind and world. Some physicists working at the frontier of their discipline are beginning to question the limitations of the present physical concept of time. Consider these statements by Roger Penrose:

It is *only* consciousness that requires us to think in terms of a flowing time at all. According to relativity, one has just a static four-dimensional space-time, with no flowing about it. The space-time is just there and time flows no more than does space. It is only consciousness that seems to need the flow of time, so we should not be surprised if the relationship between consciousness and time is strange in other ways too. (Penrose, 1994, p. 384)

It is my opinion that our present picture of physical reality, particularly in relation to the nature of *time*, is due for a grand shake up—even greater, perhaps, than that which has already been provided by present-day relativity and quantum mechanics. (Penrose, 1989, p. 371)

And here is Nobel laureate physicist Anthony Leggett (2020) addressing the future supplanting of quantum mechanics by a yet-to-be-developed more comprehensive theory:

I do not know when; I do not know how; I just know that it [quantum mechanics] will break down. For what it is worth, my entirely untutored prejudice would be that the breakdown, when it comes, will in some way or another involve also a radical revision of our ideas concerning the one pillar of our “common sense” view of the world which has been left untouched by all the past major revolutions in physics—the notion that the past can affect the present and the present the future, but not vice versa. It may or may not also involve a radical revision of our current notions concerning the relation between “mind” and “matter.” . . . In my view, the way forward is quite simply to think of more and more ingenious ways to probe the experimental predictions of quantum theory and push them closer and closer to our own experience. (pp. 29–30)

Perhaps only through a grand shaking up of the role of time in our most fundamental physical theories will the wild facts of precognition be accommodated (Rosenberg, Chapter 3 in this volume).

Physicists sometimes speak of achieving a “theory of everything.” However, there is not going to be a “theory of everything” that does not include mind and consciousness. Quoting philosopher Thomas Nagel (2012),

Certainly the mind–body problem is difficult enough that we should be suspicious of attempts to solve it with the concepts and methods developed to account for very different kinds of things [namely, an “external” and “objective” physical world]. Instead, we should expect theoretical progress in this area to require a major conceptual revolution at least as radical as relativity theory, the introduction of electromagnetic fields into physics—or the original scientific revolution itself [the era of Copernicus, Galileo, and Descartes], which, because of its built-in restrictions [to wit, the removal of subjectivity], can’t result in a “theory of everything,” but must be seen as a stage on the way to a more general form of understanding. (p. 42)

All this suggests that the next really big thing in physics will incorporate a central role for consciousness within the context of physical science. Just as we look to experiments in high-energy particle physics and to observations in cosmology and astrophysics to catalyze new ideas in fundamental physics, so might it be that investigations of the nature of mind (and perhaps even life) will lead to unexpected new ideas in physics. With respect to the study of life, this notion was advanced many years ago by physicists Niels Bohr (1933), Max Delbrück (1986), and Erwin Schrödinger (1944) and contributed to the emergence of the discipline of molecular biology. No revolutionary new physical theory has thus far been required, perhaps because the focus of investigation has continued to avoid the issue of mind and consciousness (Stent, 1968). Maybe now the time has come.

4: Explore Mind–Body Medicine and Expectation (Placebo) Effects

As stated, it has been possible to ignore mind and still achieve great scientific progress as long as the focus has been on an “outer world” described by astronomy, chemistry, geology, physics (at least prior to quantum physics), and biology (until we look closely at our own bodies). Even psychology has endeavored to split mind off, as the impressive elegance of cellular and molecular explanations has inclined many to imagine that a straightforward physicalist understanding of all of human behavior is forthcoming. Memory, emotion, perception, mathematical genius, mental illnesses, and consciousness as well—in the view of such subscribers—will be elegantly explained in terms of neurotransmitters, synaptic plasticity, neural circuits, oscillations of cerebral electrical activity, and the like.

However, once we begin to look closely and with open-minded empiricism at the impact of mind on body, there is a wealth of material that resists attempts of reduction to physical mechanisms. “Volition in general—whether of the sort that we take for granted (such as raising an arm) or rarer phenomena that more clearly challenge the currently prevailing view of mind–body rela-

tions (such as raising a blister)—remain a challenging mystery” (E. W. Kelly, 2007b, p. 237). Emily Kelly (2007b) in *Irreducible Mind* provides a detailed compendium and analysis of such psychophysical mysteries.

Consider the clinical practice of modern Western medicine, an endeavor that has developed in tandem with contemporary science in Europe over the past several centuries. Western medicine is based on our biophysical model of the world, now applied to our own bodies, and medical interventions have a logical coherence within that explanatory biophysical framework. Infection is demonstrably bad, so kill the source of the infection if possible. A malignant tumor appears to be the result of an invasive process alien to normal body function, so kill the tumor with chemotherapy or surgically remove it. Cardiac symptoms (including lack of exercise stamina, chest pain, and risk of heart attack) are associated with reduced blood supply to cardiac muscle resulting from atherosclerotic blockage in the coronary arteries, so surgically graft in new blood vessels or implant stents in the arteries to open them up, thereby increasing the flow of blood. Depressed mood, we are told, is related to hypofunction in brain neural pathways utilizing the neurotransmitter serotonin, so mood can be improved by administering antidepressant drugs (selective serotonin reuptake inhibitors) that block the reuptake of serotonin following its release, thereby increasing the availability of serotonin and countering the presumed hypofunction. And so on. In sum, there are compelling reductionist narratives underlying the understanding of these conditions and their associated clinical interventions.

Other cultures embracing differing worldviews, having radically differing explanatory frameworks, have developed different practices of clinical medicine. Chinese medicine, Tibetan medicine, and Indian Ayurvedic medicine are examples of systems differing from Western medicine. And there are many other traditional frameworks of healing in cultures around the world. A shaman from Africa or South America might say that “spirits” are involved in diseases and their treatments—sentient entities the presence of which cause physical and mental diseases and sentient entities that accomplish the healing. The practice of medicine—doctoring—is about knowing how to work with the spirits. In various Asian medical traditions, diseases are caused by imbalances in the flow of “subtle energy”—*qi* (Chinese), *lung* (Tibetan), *prāna* (Sanskrit)—through the body’s “energy channels” and “energy centers” (Sanskrit *cakras*). Acupuncture, various yoga practices, and qigong, for example, are believed to be therapeutic due to their balancing effects on these subtle energies. Something shared among all these non-Western medical traditions is that health and illness are viewed in a strongly psychophysical manner. Mind is understood to very much influence bodily processes—there is no schism between body and mind. And there is frequently no way of understanding any

of the resulting interventions within our biomedical framework other than to attribute them to “effects of the imagination.”

Importantly, I am not proposing here any sort of noncritical endorsement of so-called alternative medical systems. Any such system or practice may be approached and investigated with scientific rigor. Indeed, the U.S. National Institutes of Health has for more than twenty years maintained a center—the National Center for Complementary and Integrative Health—that promotes and funds basic science and clinical research of nonstandard medical ideas and interventions. Moreover, there is much of great value that comes from modern Western medicine. Antibiotics are very effective in reversing the course of many infections, resulting in relief from suffering and death. Vaccines derived from our knowledge of the body’s immune system have been successful in countering the deadly impacts of multiple infectious diseases. Medications for conditions ranging from seizures to Parkinson’s disease to hypertension have provided much relief from suffering and decreases in mortality—and much more. And at the same time, there remain many mysteries related to interactions of mind and body in the context of health and illness.

One such mystery is the so-called placebo effect. It is widely appreciated that hope, expectation, meaning, belief, and imagination affect how patients view their prospects of recovery from illness or injury. Beginning more than two centuries ago, the word “placebo” (Latin for “I shall please”) was introduced into the Western medical lexicon to describe treatments given to appease a patient rather than because the treatments were based on a sound medical logic. Placebos often came to be associated with medical fraud and quackery, and their effectiveness was even believed to be inversely related to patient intelligence (de Craen, Kaptchuk, Tijssen, & Kleijnen, 1999). By the mid-twentieth century, it was appreciated that the therapeutic efficacy of placebo medicines in pharmacology is often quite substantial, sometimes equal to or greater than that of the “actual” medicine. Placebo effects thus came to be seen as a threat to the growing arena of science-based pharmaceutical medicine, and the randomized double-blind placebo-controlled clinical trial was introduced as the standard for demonstrating the efficacy of a putative “real” medicine beyond that of a placebo (Harrington, 2006, 2008; Kaptchuk, 1998).

All drugs may evoke some degree of placebo effect. For example, caffeine as a stimulant has a small placebo effect. Opioid analgesics can have moderate placebo effects. And contemporary pharmaceutical antidepressants have very large placebo effects, surpassing any specific effects of the drugs themselves (Kirsch, 2010; Kirsch et al., 2008). Even certain surgical procedures (only a few procedures have been investigated for this) and coronary artery interventions have robust placebo effects (Al-Lamee et al., 2018; Hamblin, 2017;

Probst et al., 2016). The impact of hope, expectation, meaning, belief, and imagination on physical aspects of the body can clearly be profound.

In the case of psychiatric medications, reliance on neurobiological research to reveal mechanisms of and interventions for mental distress has led to little progress in understanding mechanisms and designing better treatments. Furthermore, it has contributed to a pharmaceutical industry of design and marketing of medications to address mental distress based on poorly supported mechanistic narratives, with little to show for all this beyond billions of dollars in research expenditures (funded largely by taxpayers) and billions of dollars of corporate profit from the sale of pharmaceuticals to treat mental distress (Harrington, 2019). To quote Thomas Insel, who directed the U.S. National Institute for Mental Health (NIMH) from 2002 until 2015,

I spent 13 years at NIMH really pushing on the neuroscience and genetics of mental disorders, and when I look back on that I realize that while I think I succeeded at getting lots of really cool papers published by cool scientists at fairly large costs—I think \$20 billion—I don't think we moved the needle in reducing suicide, reducing hospitalizations, improving recovery for the tens of millions of people who have mental illness. I hold myself accountable for that. (quoted in Rogers, 2017)

Mental suffering continues unabated—in fact, it is ever increasing.

Similarly, the prevailing direction of research regarding placebo effects focuses on neural correlates, with the anticipation of explaining any and all therapeutic properties of placebos in terms of molecular, cellular, and neural systems processes in the brain (Ashar, Chang, & Wager, 2017; Benedetti, 2014). However, it may also be that this interface between mind and body offers another opportunity to explore the hypothesis that something more expansive is indicated here—that is, might this be another signpost pointing to an enfolding and interdependence of mind and world, where in this case world is our own body? In addition to contributing to expanding a science of mind, this situation would benefit our understanding of health and disease in ways that directly—and perhaps relatively quickly—contribute to relief of human suffering.

5: Cultivate Dialogue and Collaboration with Spiritual Traditions

A variety of spiritual and religious traditions pervade human societies, touching in one way or another every person on Earth. All such traditions (as far as I am aware) are practiced within worldviews that conceive of reality as more than merely matter. Some traditions have very well-developed philosophies

that reflect deeply on the nature of mind and world. There is frequently interest in many of the same issues as are addressed in this volume—namely, who are we as conscious living beings, and how do we conceive of ourselves in relation to the world? Moreover, for some of these traditions, interest extends to how insight into these questions might inform one's state of mind and one's behavior, ideally inclining behavior toward serving the greater good.

Spiritual and religious traditions have a powerful impact on humanity and the state of the planet. So, too, does the scientific tradition. Given this fact, it would be beneficial to explore the common ground of interest, especially so in that this common ground is directly related to mind. Importantly, this can be accomplished without advocating any uncritical adoption of existing religious worldviews or elements thereof (see also Kelly, "Background and Overview" in this volume).

While such dialogue and collaboration could potentially take place between science and any spiritual or religious tradition, I have personal familiarity with the ongoing conversation between Tibetan Buddhism and the scientific community—a conversation and collaboration cultivated by the Dalai Lama for nearly four decades (Dalai Lama, 2005; Presti, 2020). Buddhism has a rich history extending over more than two thousand years of investigation of the nature of mind and reality. The present engagement with science has been amplified by robust interest over the past two decades in the demonstrated benefits of contemplative practices (often pared down to basic mindfulness) on mental and physical health. Also of interest is the measurement of neural and other body-physiology correlates of such practices—what is going on in the brain during meditative contemplation and what sorts of changes in the structure and function of the brain might be seen after periods of sustained practice. These are things we know how to measure—the objective correlates of mental practices.

Contemplative practices often include highly refined ways of exploring subjective experience—an investigative process that has not been well developed in contemporary science with its focus on an objective world. An expanded science of consciousness will be well served by incorporating processes for exploring subjective experience with rigor (Wallace, 2000). And combining such investigations of mental experience with neurobiological measurements of correlated activity may provide particularly fertile territory (Goleman & Davidson, 2017; Varela, 1996; Varela & Shear, 1999).

That said, another hugely important aspect of the collaborative conversation between science and Buddhism is the engagement of very different perspectives on the relationship of mind and world. In some prominent schools of Buddhist philosophy, mind and world are seen as enfolded, as dependently arising—an excellent framework within which to expand a science of con-

consciousness. Thus, the project of this volume may be served by continued cultivation and deepening of the collaborative conversation with Buddhism already under way (Hasenkamp & White, 2017; Presti, 2018; Wallace, 2003). However, thus far, this dialogue has avoided coming to grips with the profound differences between Buddhist metaphysics and Western physicalism. As Edward Kelly and I have emphasized, it is precisely at those points of conflict that the best opportunities for theoretical progress lie waiting, still mostly untouched (Presti, 2018, pp. xiii–xxii).

CODA

I am a scientist and an educator. My primary audience is the scientific community and the public collective (including university students), who, although they may not be professional scientists, nonetheless have interest in science and perhaps take seriously the perspectives of science in guiding one's actions in the world. The value of the scientific method and respect for its findings is especially important at the present time as we collectively struggle with how to address issues like anthropogenic climate change, the impact of diet on health, and viral pandemics. Problems are further exacerbated these days by virtue of our living in a world that has unprecedented informational connectivity and at the same time is awash with attention-grabbing and often misleading advertising and other forms of widely disseminated misinformation.

The mission, as I would like to frame it, is to develop a science that can investigate—in an expanded empirical manner—all the sources and mechanisms by which mind experiences the world. A central message of this series of volumes is that a variety of metaphysical frameworks exist that can accommodate such an expanded science. None of these frameworks serve to “explain” consciousness, but they all give us a stage on which to push the empirical science forward into new territory—terrain assumed not to exist within our currently more restricted set of metaphysical assumptions.¹⁴ It's rather like ancient beliefs about Earth's geography—there was a time when it was not considered possible that Earth might have a spherical shape, that the oceans might be finite in extent, and that sailing west from Europe might lead to Asia (let alone to other inhabited continents). The playing field of ideas about future knowledge and possibility was simply too restricted. This is where we are today in relation to the impasse around expanding a science of consciousness. Thus, let us take empiricism as our guide and with a sense of adventure set forth to investigate and discover.

The newly adopted metaphysics would appreciate that mind and world are deeply enfolded and interdependent. We deduce the presence of a material

world via our consciousness, and we place our consciousness—and the brain and body through which we experience—within this world. As Max Velmans states in Chapter 5 in this volume, “Through the evolution of matter, consciousness is given *form*. And through consciousness, the universe is *real-ized*.”

This chapter opened with a quotation from Max Planck (1933), one of the founders of quantum physics: “Science cannot solve the ultimate mystery of nature. And that is because, in the last analysis, we ourselves are part of nature and therefore part of the mystery that we are trying to solve” (p. 217). Planck’s view of science was correct in that it was and still largely is carried out as a set of practices designed to investigate and understand an objective world “out there,” independent of our mind. Planck appears to appreciate the difficulty posed by turning those methods toward studying the human mind and its irreducible subjectivity. Quantum physics had already provided indications of weirdness associated with acts of measurement—a capacity to change the physical reality of the world through observing it. And 1933 was still several years before EPR would introduce entanglement and a new domain of weirdness.

As to whether science will ever “solve” the ultimate mystery of nature, I offer no speculation. However, I do maintain that by shifting our metaphysical framework, appreciating that the subjectivity of experience can be investigated with rigor, and letting an expanded empiricism be our guide, great progress can be accomplished in deepening our insights into mind and how we as conscious living beings are related to the world and cosmos.

All our science to date points to a deeper and more nuanced connectivity and interdependence in the biophysical world. All life on Earth not only is deeply interconnected but also interacts with other planetary processes—ocean dynamics, climate, and geology. Plants, even of differing species, communicate with one another via airborne molecules, root systems, and vast underground mycorrhizal networks. The symbiotic relationship we have with trillions of microorganisms living on and within our bodies far surpasses anything previously imagined. There is deep interconnectivity and interdependence everywhere we look.

Nearly two thousand years ago, Nāgārjuna, an influential architect of Mahāyāna Buddhist philosophy, stated, “There does not exist anything that is not dependently arisen” (Garfield, 1995, p. 69; 2015, p. 64). In other words, everything is deeply interconnected and interdependent. Everything depends on everything else. And Nāgārjuna was not referring only to what we call the physical world—the objects of our perception. He was referring to consciousness as well.¹⁵

This idea is in line with the contemporary data, viewed now within an expanded metaphysical framework and from an expanded empirical perspective. That is, consciousness, though manifest through personal experience, is inter-

dependently connected with everything—truly, consciousness unbound. The task now is to see where such an expanded perspective takes us empirically. And all this is completely in accord with the historical trajectory of modern science as it has evolved over the centuries to accommodate new domains of investigation. A scientific revolution is nigh.

How we choose to define and understand mind has a powerful impact on our lives at every level. It influences our biomedical science—and how we relate to our bodies in health and disease. It influences our relationship with technology and the environment, our concepts of past and future, and our connections with ancestors and descendants. Questions about the nature of mind naturally evoke notions of spirit, soul, and even God and the many different definitions, connotations, and emotional reactions people have in relation to these terms. Investigation of who we are and how we relate to the rest of the universe can bring one into what is generally considered the territory of religion and, some maintain, outside the domain of science. This can be unsettling—to individuals in either camp. Indeed, this very concern was a major factor for why mind was removed from the playing field of scientific investigation in Europe several centuries ago. Nonetheless, questions regarding the nature of reality and of mind—who we are and how we understand our place in the world—are of interest both to science and to religious and spiritual traditions. This situation can provide opportunities for dialogue that is increasingly essential in the contemporary world—a world in which the speed and intensity of dissemination of everything from information to technology to viral infection make the impact of our actions (or nonactions) all the more powerful.

That we may be poised for truly revolutionary developments in a science of mind is exciting to contemplate. And that these developments may have a profound impact on the way we navigate the world individually and collectively is especially exciting. May the revolution come about, and may it come about in such a manner that humanity benefits collectively—and sooner rather than later.

NOTES

1. Planck (1933, p. 217). Max Planck (1858–1947) was one of the architects of quantum physics and the first to put forth (in 1900) the notion of what came to be called energy quanta.

2. Garfield (1995, p. 69; 2015, p. 64). Nāgārjuna (ca. second century CE) is considered the founder of the Madhyamaka school of Mahāyāna Buddhist philosophy. Quoted from Nāgārjuna's *Mūlamadhyamakakārikā*, 24.19, translated by J. L. Garfield.

3. Some branches of science, such as chemistry and physics, are very experimentally oriented. Others, such as astronomy and geology, are mainly observational.

4. Defining mind and consciousness can be tricky, as various authors use them in different ways and often in service of promoting particular philosophical stances. I am adopting, at least for the purposes of getting a scientific discussion under way, definitions that I believe would be found acceptable to the majority of folks within the biophysical-psychological scientific community. However, as will become clear in this chapter, I also believe that the physicalist perspective currently embraced by this community cannot undergird the expansion of a science of consciousness. Thus, I have no wish to reify these definitions. For consciousness, like Paul Marshall (Chapter 11 in this volume), I am comfortable with a definition that is synonymous with experience, subjectivity, phenomenal feel, sentience, and what it is like to be. However, a definition for mind remains a work in progress for me. How much more expansive might mind be than what is available—or even potentially available—to phenomenal consciousness? This is addressed by Max Velmans (Chapter 5 in this volume), by Roderick Main (Chapter 4 in this volume) regarding Carl Jung, by Paul Marshall in his comprehensive survey of the metaphysical landscape (Chapter 11 in this volume), and also by Kelly et al. (2007) in *Irreducible Mind*, especially with respect to the ideas of Frederic Myers and William James. Importantly, these additional definitional considerations don't impact the main thrust of the present chapter in the least.

5. The behaviorist agenda did away with introspection and other ways of investigating subjectivity—considering it no longer helpful or proper to discuss things such as consciousness, mental imagery, thoughts, feelings, or anything else having to do with experience. The vision was for a psychology concerned only with the study of stimuli and responses—a discipline that would become “a purely objective experimental branch of natural science” (Watson, 1913, p. 158).

6. In *The Double Helix*, James Watson's (1968) candid autobiographical description of the discovery of the structure of DNA, codiscoverer Watson refers multiple times to the DNA structure as the “secret of life.”

7. This notion has been called “promissory materialism” by philosopher of science Karl Popper (1902–1994), and the concept was further elaborated in collaboration with Nobel laureate neurobiologist John Eccles (1903–1997). According to Popper, promissory materialism “offers us the promise of a better world, a world in which mental terms will have disappeared from our language, and in which materialism will be victorious. The victory is to come about as follows. With the progress of brain research, the language of the physiologists is likely to penetrate more and more into ordinary language and to change our picture of the universe, including that of common sense. So we shall be talking less and less about experiences, perceptions, thoughts, beliefs, purposes and aims; and more and more about brain processes, about dispositions to behave, and about overt behaviour. In this way, mentalist language will go out of fashion and be used only in historical reports, or metaphorically, or ironically. When this stage has been reached, mentalism will be stone dead, and the problem of mind and its relation to the body will have solved itself” (Popper & Eccles, 1977, p. 97). Several years later, Eccles stated that “we regard promissory materialism as a superstition without a rational foundation. The more we discover about the brain, the more clearly do we distinguish between the brain events and the mental phenomena, and the more wonderful do both the brain events and the mental phenomena become. Promissory materialism is simply a religious belief held by dogmatic materialists.

. . . It has all the features of a messianic prophecy—the promise of a future freed of all problems, a kind of Nirvana for our unfortunate successors. . . . In contrast the true scientific attitude as described by Popper is that scientific problems are unending in providing challenges to attain an ever wider and deeper understanding of nature and of ourselves” (Eccles & Robinson, 1984, pp. 35–36).

8. This radical expansion of empiricism is not what James termed late in his career as the doctrine of “radical empiricism,” although it is easy to conflate these notions.

9. For an in-depth discussion of the visionary contributions of Frederic Myers (1843–1901) to scientific psychology, see E. W. Kelly (2007a).

10. Note that James’s insights were many years before Thomas Kuhn (1922–1996) in his classic book *The Structure of Scientific Revolutions*, first published in 1962, drew attention to the important role of anomalies in catalyzing revolutionary reconfigurations (paradigm shifts) of scientific knowledge. Kuhn (1962/1996) characterized anomalies as phenomena “whose characteristic feature is their stubborn refusal to be assimilated to existing paradigms” (p. 97).

11. James uses “mystical” very broadly in this essay, referencing “divinations, inspirations, demoniacal possessions, apparitions, trances, ecstasies, miraculous healings and productions of disease,” occult powers, mediumship, and various charismata. More recent usage of the term is often not so broadly inclusive.

12. This message runs throughout previous volumes in this series as well, especially *Irreducible Mind* (Kelly et al., 2007).

13. I use “grounding” to mean foundation, stability, strength, rootedness, solidity, or equanimity—analogous to connection to the palpable firmness of the literal ground of Earth. In shamanic practices, reference is made to grounding rituals and grounding plant medicines, such as tobacco. In Ayurvedic medicine, there are grounding foods and plant medicines.

14. Such metaphysical assumptions are deeply embedded in culture and largely out of our awareness. Most scientists believe they conduct their work without any bias, simply open to the data the world presents. However, such is not the case. Metaphysical assumptions are pervasive and severely constrain the playing field of scientific investigation. And physicalism is not the only such cultural assumption. At the time of the writing of this chapter—as the world is immersed in a coronavirus pandemic—the United States is additionally embroiled in long-overdue activities bringing increased awareness to the extent of systemic racism and oppression at both conscious and unconscious levels. It is worth noting that the reification of physicalism and the notion of objective reality emerged from “European enlightenment epistemology” with its “presumed neutrality”; this is the same “European enlightenment epistemology” that reified assumptions about white skin versus dark skin—validating and elevating “positivistic, White Eurocentric knowledge over non-White, Indigenous, and non-European knowledges” (Sensory & DiAngelo, 2017, p. 561).

15. Nāgārjuna and the Madhyamaka school of Mahāyāna Buddhism equate interdependence or dependent arising with the notion of “emptiness”—a concept often misunderstood. Emptiness is not nothingness, but rather the absence of an intrinsic nature. “Because all phenomena are dependently arisen, they lack, or are empty of, an intrinsic nature characterized by independence and autonomy” (Buswell & Lopez, 2014, p. 872). The notion of the emptiness of all phenomena was further

explicated several centuries after Nāgārjuna in the famous *Heart Sutra* (Buswell & Lopez, 2014, p. 657). A new translation of the *Heart Sutra* accompanied by commentaries on the text—emphasizing emptiness as meaning profound interdependence—is by Thich Nhat Hanh (2017).

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THE FUTURE OF THE HUMAN(ITIES)

Mystical Literature, Paranormal Phenomena, and the Contemporary Politics of Knowledge

Jeffrey J. Kripal

The person is what I appear to be to other persons. To myself I am the infinite expanse of consciousness in which innumerable persons emerge and disappear in endless succession.

—Sri Nisargadatta Maharaj, *I Am That*¹

It actually seems, to allude to something Zarathustra says, as if the things themselves approached and offered themselves as metaphors.

—Friedrich Nietzsche, *Ecce Homo*²

The future is more coherent than the present, more animate and purposeful, and in a real sense, wiser. It *knows* more, and some of this knowledge gets transmitted back to us by what seems to be a purely natural phenomenon. We are being talked to, by a very informed Entity: that of all creation as it lies ahead of us in time.

—Philip K. Dick, *The Exegesis*³

I am a historian of religions by training. I compare religions. More specifically, I compare extreme but fairly common human experiences that display some transcendent or anomalous dimension, some feature that violates the way we generally think the world works and who or what a human being is. I take these experiences very seriously, as relatively reliable access or contact points, portals perhaps, to the actual structure and nature of consciousness and cosmos.⁴

I must stress that adverb—*relatively*. Such evidential encounters with the real as consciousness and/or cosmos are seldom (if ever) without cultural,

psychological, and historical influence. The human being is a filter and a projector of the real, a living text and a sci-fi movie, a window and a mirror. Translation and interpretation are always necessary.

Put a bit more specifically, the historically conditioned projector of the religious imagination is constantly projecting cinematic-like narratives and sci-fi special effects (often of a psychokinetic nature) out of itself; the human person is constituted in and *as* these stories and special effects; and genuine and important differences and pluralities are obvious *within* these real-world movies. Mystical experience and paranormal phenomena, then, are not the same wherever we look, but this does not mean that such events are not projections or expressions of some shared, if finally indescribable, human consciousness.

Or superconsciousness.

All of this in turn requires training and expertise in the hermeneutical, historical, philosophical, and reflexive practices of the humanities, to which we will turn in a moment. The scientific method, broadly conceived here, is at once absolutely essential and fundamentally insufficient. If I might riff on Bob Rosenberg in the conclusion of Chapter 3 in this volume, what we need is not a tinkering with this or that detail of our scientific education and practice, but rather “an epochal shift”—in short, intellectual and cultural earthquakes on a global scale.

The opening epigraphs from Nisargadatta, Nietzsche, and Dick are fairly typical of the kinds of textual deposits with which I work, deposits—to continue the geological metaphor—that become obvious and significant only when the world cracks open and reveals its buried treasures. Such epigraphs are not meant to be easy or transparent. That’s part of my point. They need context. They need translation. They need to be interpreted.

These three epigraphs encode nicely my own convictions about the mystical, the paranormal, and a future cosmic humanism. I want to explain something of these convictions up front. I will then move on to the autobiographical earthquakes through which I arrived at the fundamental realignments that revealed such deposits as deeply meaningful, indeed, as some of the best clues to our deeper history, both in the past and, as Dick has it, in (and from) the future.

May the earth shake for you, as it did for me.

DEFINITIONS AND POSITIONS

I begin with some definitions around some key terms and expressions, specifically, dual-aspect monism, the Human as Two, the paranormal, nondual-

ism, Tantra, and the relationship between mystical literature and paranormal phenomena. Once we get these key categories and relations set up, we can proceed immediately to the main task of this chapter, which is to discuss the present and future state of the humanities with respect to the study of mystical experience and paranormal phenomena.

On Dual-Aspect Monism

I have come to discover over the decades, often to my own great surprise, that the “secret body” or unconscious structure of my thought generally orbits around what philosophers of mind call a decompositional dual-aspect monism (Kripal, 2017). The latter can be defined as *the conviction that the mental and material domains of our ordinary experience are epistemologically dual (with an inside/outside or subjective/objective structure) but, in ontological fact, emerge or “split off” (the decomposition part) from a more fundamental monistic super-reality that is neither exclusively “mental” nor “material,” but rather both or neither.* Put most simply, while human experience is ordinarily experienced as two, reality itself is one, or One, hence the expression “dual-aspect monism.”

One of the clearest expressions of this position is a simple diagram that the quantum physicist Harald Atmanspacher has created for us out of an earlier decades-long conversation between the depth psychologist C. G. Jung and the pioneering quantum physicist Wolfgang Pauli. Here it is in Figure 10.1—my intellectual-spiritual life in one box, two lines, and fourteen words.

The two domains above the horizontal line constitute the two epistemological poles of our ordinary everyday experience (and of the scientific method), which is indeed split into two separate and seemingly independent domains: an internal conscious domain of mental experience and an external domain of observed objects and other people. In this model, note that neither the mental nor the material domains can be reduced to the other but

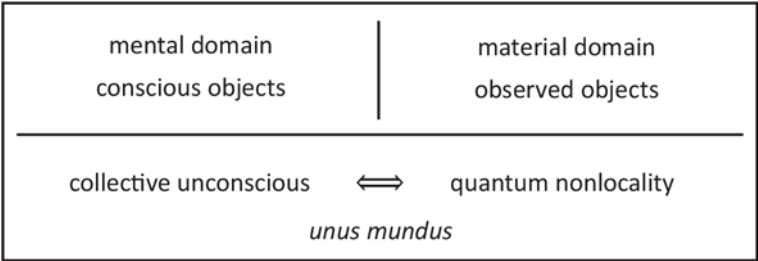


Figure 10.1. Dual-aspect monism according to Pauli and Jung.
(© Harald Atmanspacher, 2014, p. 253, fig. 4, from “20th century variants of dual-aspect thinking,” *Mind and Matter*, 12, pp. 245–269. By permission of Harald Atmanspacher.)

are, of course, correlated or related in human experience. Below the line lies the ultimate nature of reality, which is not directly accessible to our ordinary mental lives but which can manifest in strange and paradoxical ways that often “unite” the mental and material domains since it lies “below” them and “is” both of them in some fundamental sense.

Jung referred to this depth in his own work as the “collective unconscious” or, drawing on the history of alchemy, as the *unus mundus*, or “one world.” In Pauli’s language, this is the realm of “quantum nonlocality,” where matter, energy, space, and time behave in radically nonsensical ways that violate how we think the world works. This realm is psychophysical or, in Jung’s term, “psychoid.” In the language of the philosophers, it is sometimes called “neutral” because it is neither strictly mental nor material.

On the Human as Two

My thought—and certainly my writing—may not fit entirely within such a dual-aspect model, particularly when the *unus mundus* is described as “neutral.” This is correct, I suppose, but it is also aesthetically weak.

In other words, the problem I have with this kind of language is that it is much too tame and abstract. As such, any invocation of the “neutral” simply does not speak to or reflect my own historical materials (and persons), which speak of the fundamental ground of things in wildly ecstatic, paradoxically poetic, and “oh-my-God-you-will-not-believe-what-I-just-experienced” ways. This fundamental ground, once known or touched by a human being, is anything *but* “neutral.” This is the secret of secrets, the future of the species, the meaning of the cosmos, the ultimate end and goal to which we are all evolving with all of creation. Whatever it is, it is *fantastic*.

I am also aware (because colleagues keep telling me) that I sometimes sound more like an idealist than a dual-aspect monist in that I often speak of this superground as a form of Consciousness or Mind. Maybe I am. I am simply trying to reflect my historical sources. All I can say is that I resonate deeply with the dual-aspect monist insistence that this superground is psychophysical or material-mental or, if you prefer, that it is neither, because that is what my sources so commonly suggest. But I am hardly attached to the descriptor “dual-aspect monism.” And I agree with Glenn Alexander Magee (Chapter 6 in this volume) that these philosophical systems are often interpretations of various forms and grades of mystical experience and should not be taken as ends in themselves.

I thus much prefer open-ended and allusive expressions over abstract systemic ones. My preferred language, then, is not “dual-aspect monism,” the “collective unconscious,” or “quantum nonlocality” (go ahead—try to use

those at your next dinner party), but rather a little four-word poem that I hymn in my work as the Human as Two. Not that that little poem is exactly obvious and clear, either. But I *like* that fuzziness because it is flexible and open ended and so can be used in countless contexts and with different intentions.

Still, I understand perfectly well that I also need to define it—to be less fuzzy, as it were. By this key phrase, then, I do not mean that the human is *really* two things. Actually, I mean the opposite.

Sort of.

I mean to evoke *both* the horizontal relationship of the mental and material domains “above” the ontological line of Atmanspacher’s diagram *and* the vertical relationship between the mental/material domains “above” that same line and the one world “below” it. Put a bit differently, I mean to invoke *both* the splitting of the real into temporary human subjects and a world of objects in ordinary sensory and cognitive experience *and* the deeper ground from which these subjects and these objects split off and emerge “up” here. I mean that the Human is Two *and* One.

On the Paranormal

Such background convictions explain well why I am so philosophically and professionally interested, to the occasional distress and collegial embarrassment of some of my academic friends, in paranormal phenomena. I define the paranormal as *any event or experience, usually of an extreme or dramatic nature, that temporarily collapses the subject/object structure of ordinary human experience* (including scientific experience and experiment).

I am so interested in these moments because they look *a lot* like lived experiences of a dual-aspect monistic world. I suspect they are. This would certainly explain why the mental and material dimensions within a typical paranormal experience “correspond” or “coincide” so precisely (as in a synchronicity or “coincidence” that is not really a coincidence). The mental and material dimensions of such an event uncannily correspond or coincide because they *are* the same superground manifesting indirectly in two different domains, though not, of course, directly or immediately within the superground, as in a full-blown mystical experience. In short, the category works beautifully as a distant signal or sign of the *unus mundus* but not a full realization of the way things really are “down” there.

Allow me a story here, a story that involves the Esalen symposia from which this trilogy emerged. I often refer to these symposia as “esoteric Esalen” because very strange things happen during and around them, things that are often kept secret. Some of these have been psychokinetic in nature (think spoon bending) and have given witness to what I have called a sociology of

the impossible, by which I mean to point to the profoundly social, emotional, and connective nature of paranormal events (Kripal, 2010, 2012).

Here is one such story. I once attended an Esalen symposium. When it was finished, I had to fly across the country to Philadelphia to lead a retreat for a Quaker community deeply interested in Jungian psychology. So I was flying literally from one coast (Big Sur) to the other (Philadelphia), from one parapsychological topic to another.

I got in my rental car very early in the morning and took off down the road on Highway 1, a spectacular route by any measure. As I rounded one of the many slow corners of the road in Big Sur still, a fox appeared at the side of the road, just staring at me, clearly *at* me. We were just a few feet away from one another. I looked at her (I don't know why I think it was female) from my open car window as I slowly drove around the dangerous corner. I noticed. So did she. I had never seen a fox in the wild, and the fox had clearly seen me, as if to say, well, *something*. I did not know what.

The day continued into the night from airport to airport: San Francisco, Denver, Philadelphia. I finally landed sometime after midnight. My Quaker host picked me up and took me to my hotel outside the city. As we drove to the hotel, I naturally looked out my window. There in the darkness, but clear as can be, believe it or not, was the same damned fox! Okay, I am sure it was not the same fox (that would be quite the run), but it was, well, also the same fox. It was impossible to miss or not to notice, as if that was the point again.

I was deeply struck by this double sighting. I had *never* seen a fox in the wild, and on this day, I had seen two of them, on exact opposite coasts. I got to my hotel, puzzled but also convinced that something was happening, that I was in some kind of "zone." As I took a shower, it struck me, and I laughed out loud. I had been reading the journals of the founder of Quakerism, George Fox, for a month or so in preparation for my lectures, and I was about to begin, the next day, a retreat for his American Quaker followers on Jungian psychology and, of course, synchronicities. "Here is one," the *unus mundus* was saying to me.

I began the Quaker retreat with the (George) Fox story. They loved it, of course, as did I. It is a bit silly (as many synchronicities are), but it manifests rather perfectly what I am trying to get at here. We can speak abstractly in terms of "dual-aspect monism," about the "splitting" of the "mental" and the "material" domains from a deeper "neutral" domain, even about the "symbolic," "narrative," or "semiotic" nature of paranormal events. And I do, all the time. But we can also see two foxes on the same day on two different coasts on the way to lecture about George Fox and synchronicities. And I did.

Such experiences/events, of course, do not constitute full-blown mystical experiences of the fundamental unity of the world. Again, they are taking

place well “above” the line in the conscious experience of a separated subject surrounded by separated objects. But they still speak of this same ground. They signal it. Indeed, they joke about it in absurd and punlike ways.

On the Nondual and Tantra

Because I was originally trained in Hindu and Buddhist philosophical thought and Indian history, I sometimes use the word “nondual” to gloss the vertical relationship between the mental-physical domains and the deeper ontological ground of dual-aspect monism. Things get more serious here. We need to be very careful with such a word since, historically speaking, there are many different forms of nondualism, named as such in the Hindu and Buddhist traditions and more or less implied in some rare theistic mystical writers such as Meister Eckhart.

I think there is real and universal gnosis (*jñāna*) in the Hindu nondual (*advaita*) traditions, but I am personally more attracted to the related but different Hindu and Buddhist Tantric traditions. I mean something very specific by “Tantric” and “Tantra” and probably not what you think. Much too briefly and simply, *Tantra is a comparative term used by scholars of Asian religions to describe any number of Asian philosophical, ritual, and practice systems that profess a bipolar but nondual vision of reality that consists of a transcendent form of Consciousness, Mind, or Godhead that emanates or expresses Itself, energetically and immanently, in and as the human body and the material universe.* The physical cosmos is not an illusion (*māyā*), neither quite real nor unreal, as one has it in some forms of Advaita Vedanta. Here, in the Tantric traditions, the physical universe is an actual, intimate, even erotic expression of the Godhead, and the human body, particularly in its esoteric dimensions, constitutes the surest set of contact points into this same cosmic Being.

What such premodern Tantric traditions lack in terms of the panentheistic vision expressed in places in this volume is the specific evolutionary framework of modern science. Such a framework has already been woven into the Tantric systems (generally not named as such) by the Bengali political revolutionary and independence fighter turned spiritual teacher Sri Aurobindo Ghose (1872–1950). Not accidentally, Aurobindo happens to be one of the primary influences on Michael Murphy, the cofounder of Esalen (Kripal, 2007). Here is a typical passage on “the life divine” from the guru, with a little Nietzsche thrown in (and transformed):

Man himself may well be a thinking and living laboratory in whom and with whose conscious co-operation [Nature] wills to work out the superman, the god.

Or shall we not say, rather, to manifest God? For if evolution is the progressive manifestation by Nature of that which slept or worked in her, involved, it is also the overt realisation of that which she secretly is. . . . Thus the eternal paradox and eternal truth of a divine life in an animal body . . . a single and universal consciousness representing itself in limited minds and divided egos, a transcendent, indefinable, timeless and spaceless Being who alone renders time and space and cosmos possible. (Aurobindo, 1990, pp. 8–9)

These same Indian Tantric traditions, I must add, also value the *siddhis* or “superpowers” of Tantric lore in ways that go well beyond the other Indian traditions (which often dismiss them) but resonate strongly with the consistent parapsychological interests of Michael Murphy and the Esalen symposia (Kripal, 2011a). Many of the Tantric traditions even locate the cardiac region of the human body as the esoteric door or portal through which this Consciousness beams in, more or less exactly as Federico Faggin describes his own awakening in Chapter 8 in this volume.

To put the matter comparatively, I think that what we have been doing in these Esalen meetings is developing our own evolutionary esotericisms or pantheisms, very modern and very American fusions that nevertheless resonate extremely well with the premodern Tantric traditions, which were themselves contemporary fusions of their own place and time. The American and Asian systems are not the same, of course, but they are pretty darn close, and, sometimes, as in Faggin’s cosmic heart-opening, I simply cannot tell the difference, probably because there is none.⁵

On the Relationship Between Mystical Literature and Paranormal Phenomena

My title references two separate kinds of textual deposits: comparative mystical literature and paranormal phenomena. The former mystical literatures have been endlessly collected, demeaned, analyzed, organized, reorganized, theorized, and debated in numerous European and Asian languages for almost two centuries now in the professional study of religion. The latter paranormal phenomena are scattered widely through a wild and woolly collection of genres: ancient reports of “prodigies”; medieval hagiography or the lives of the saints; heresiologies; folklore on magic and witchcraft; nineteenth-century Spiritualism and British psychical research; the anthropology of shamanism; modern parapsychology journals; countless scattered essays and books in psychiatry, anthropology, disability studies, extreme sport, psychedelia, and near-death and out-of-body experience; and, not to be underestimated or overlooked, pop-paranormal cultural expressions (think pulp fiction, science fiction, superhero comic books, film, and television). It’s a glorious mess.

For those familiar with the scholarship on mysticism, these two literatures (the mystical and the paranormal) align roughly (but not completely) with what Walter T. Stace (1960) categorized as “introvertive” and “extrovertive” mysticism, with the latter sometimes framed (and often subtly or not so subtly demeaned) as “nature mysticism.” Generally speaking, introvertive mysticism names those transcendent mystical states that put the accent on the fundamental nature of pure consciousness, whereas extrovertive mysticism names those immanent mystical states that put the accent on the fundamental nature of the cosmos and, sometimes, its intimate relationship to pure consciousness. I would classify the opening epigraph from Nisargadatta as an ideal example of the former introvertive state and the Nietzschean epigraph on the natural world approaching one as a set of meaningful metaphors as an ideal example of the latter extrovertive state.

The distinction is fair enough, as individuals have sometimes claimed to know directly either the depths of human subjectivity or the secret workings of the objective world. I would put Nietzsche’s immanentist teachings of the “eternal recurrence of the same” and the evolution of a future “superhuman” (*Übermensch*) here (Kripal, 2017, p. 455). But there are other, very different encounters with temporality or evolution in the literatures, often (but by no means always) displaying a transcendent claim or conviction. For example, mystical experiences of the coexistence of all times, or even of temporal “loops,” are not uncommon in the modern world, as Paul Marshall (2015) and Eric Wargo (2018) have shown in their own specific ways.

My problem with this traditional scholarly distinction between the introvertive and the extrovertive is that it is descriptive and helpful enough but finally too dualistic. The fact is that many mystical states clearly display both dimensions or collapse the distinction between “inside” and “outside” altogether. *That’s* their point. I am certain that it also matters—and matters a great deal—that my dual-aspect monism insists that these two dimensions *are* split-off domains of a more fundamental ground or super-reality. In short, my metaphysical assumptions prevent me from isolating either type in any final or stable way. I suppose I just do not finally believe in the typology, although I see its relative usefulness. I think “introvertive” and “extrovertive” are a lot like “mental” and “material”: they are *epistemologically* true enough, but they are *ontologically* inadequate. Or, to be a bit less diplomatic, they are finally simply not true to the real.

Still, they are useful, and it is certainly the case that our two sets of historical deposits—traditional mystical literature and the paranormal genres—can be quite different and roughly in these inner and outer ways. A parapsychological journal essay on synchronicities, an e-mail report of a precognitive dream, or a comic book description of a real-life UFO encounter is not a

Blakean poem or the transcribed teaching of a Hindu guru. *But they are also very much related.* Both sets of historical deposits, after all, encode fundamental human experiences that tend to collapse the subjective/objective structure of our sense of self and the world.

When a comparativist like myself adopts an abstract metaphysical model like dual-aspect monism from the philosophy of mind, what one is really looking for is a certain intellectual payoff. One is looking for a way to organize and think about one's historical material—that is, to compare them. The cognitive act of comparison relies on something more fundamental, however. It relies on a metaphysics of sameness and difference. This is what dual-aspect monism gives one. It acknowledges both sameness and difference, and in fairly precise ways. Difference reigns “above” the horizontal line, as every mental domain is conditioned and shaped differently and every material condition is different. Sameness reigns “below” the horizontal line, as it is really all finally One World.

If such a model works, then one uses it. If it does not work, then one sets it down. It is a tool, not a destination; a map, not the territory. As it turns out, the dual-aspect monistic model works quite well. It pays off. It maps a good deal of the territory, that territory in which I am always getting lost anyway.

I can well imagine, for example, a set of experiences in which the *unus mundus* breaks through and splits up into the mental and material domains and remains there, above the line, as it were: let us call these paranormal experiences. Such was my Fox story or Nietzsche's confession about things approaching him as meaningful metaphors (mine approached me as bad puns).

I can well imagine a set of experiences in which the *unus mundus* breaks through primarily up into the mental domain but leaves intact or simply ignores the material domain: let us call these introvertive mystical states of consciousness.

I can well imagine a set of experiences in which the *unus mundus* breaks through primarily up into the material domain but leaves the ordinary mental sense of self intact: let us call these extrovertive mystical states of cosmos. I am thinking of a precognitive dream, for example, that reveals that space and time are not what we think they are but does not fundamentally reshape or erase the ego.

I can well imagine a set of experiences in which the *unus mundus* breaks through entirely and outshines or swamps both the mental and the material domains: let us call these nondual events. Such is the goal and ideal of some mystical literature, especially in Asia. I would place Nisargadatta's description in my opening epigraph here.

These very different but very similar types of collapse and what it all might mean for the reimagining of ourselves is what I want to address

here in this chapter on the politics of knowledge and the future of the human(ities). This is the pragmatic goal to which I want to put the mystical literatures and paranormal genres.

More specifically, I want to explain as best I can what the humanities look like today, why they are so important to our present concerns, and why they generally dismiss or are deeply suspicious of the topics that so excite us in these volumes. I also want to observe how the humanities have always contained within themselves other ways of knowing that can well be called “mystical” and “paranormal.” I call these the superhumanities or, alternately, the academy’s secret superhumanism, our *pensée surhumaine* or “superhuman thought” (Kripal, 2017). Such superhumanities are aimed at what Michael Grosso (personal correspondence) has so beautifully called, in a near identical spirit, our evolving “superhumanity,” has linked to mental and material phenomena like telepathy and psychokinesis, and has identified as the deepest purpose and function of a truly higher education.

Grosso’s language is clearly Nietzschean. There is a good academic reason for this. Nietzsche, it turns out, lies at the source and origin of much of the most radical humanist reflection and criticism, including that which we now call relativism, nihilism, and postmodernism. He is also the teacher of the “eternal recurrence of the same” and the coming “Superman” (the German *Übermensch* could also mean the “Superhuman”), and his *Thus Spoke Zarathustra*—in which both of these teachings are most famously set out—is the best-selling philosophical work *of all time*.

The eternal. The same. The Superman. I can’t think of three less relativist, nihilist, or postmodern expressions, and in the most widely read philosophical work ever published in the humanities.

So it’s complicated.

Let me try to explain.

HOW I CAME TO SEE

Ed Kelly is too humble to say it, but he is the real force, the common golden thread that has woven together and finally brought to fruition these three volumes. I have followed Ed and his trilogy with keen interest since its first volume (Kelly et al., 2007) was conceived almost two decades ago now. Indeed, the first Sursem meeting, which took place the first week of December 1998, coincided almost exactly with my own first visit to Esalen, which took place the week before. Ed in fact took me to the airport, where I believe he was picking up some colleagues for the first Sursem meeting. My Hindu friends would call such a beginning “auspicious.”

Indeed. Over the next two (now three) decades, I would have the great honor of taking part in many of the Sursem meetings alongside other symposia that Esalen's Center for Theory and Research was sponsoring on related "impossible" topics: from panentheism, paranormal pop culture, and precognition to ufology, quantum physics, and the spiritual but not religious. I have now participated in, hosted, or cohosted about fifty of these weeklong symposia, with each one consisting of about twenty to twenty-five scientists, philosophers, historians, and, often enough, extreme experiencers.

No events have had a greater effect on my intellectual and spiritual development than these symposia and their participants. They remain the gold standard for me, the long moment that definitively and dramatically changed the direction of my thinking and my spiritual life. And the Sursem meetings were, in many ways, the most highly polished and expertly curated of these events—the gold gold standard, I suppose.⁶

Gradually, over the course of the decades of meetings and interactions, I came to realize, with a growing sense of shock and liberating confusion, that many of the psi phenomena that I had been trained to ignore or dismiss as legends or pious exaggerations—as "miracle," "folklore," or, worse, "magic"—and separate from true or genuine religious experience should not in fact be separated and are quite real. They are "real" in the simple sense that *they happen*.

I also came to see, particularly from my Esalen interactions with the scientists (mostly physicists and neuroscientists), that these psi phenomena cannot be set aside as statistical blips or fantastic coincidences, as my conventional scientific colleagues back at the universities wanted to do (and did do and still do). I came to see that the data on the rogue phenomena are remarkably robust and more than convincing, even if they, too, "do not behave"—that is, even if these phenomena in their most extreme and convincing forms cannot be replicated in a laboratory for some very good reasons. Those reasons? Rogue phenomena tend to manifest spontaneously in life-cycle moments of crisis, illness, trauma, danger, and death, none of which can be ethically reproduced or predicted in a controlled experiment. (This is not always the case, of course. At other times, the most remarkable psychical phenomena occur in the most banal and ordinary of situations.)

Over the years, I came to realize something further—about my own humanist discipline this time. I came to realize that these same experiential phenomena lie at the historical origins of many religious formations—that is, that basic religious ideas around the world (like the idea of a separable soul that survives the demise of the body, the existence of departed and sometimes troublemaking spirits, or the super-capacity of particular individuals to intuit or even see the future, bilocate in apparitional forms, or even physically

levitate) are based on actual human experiences that are astonishingly well documented in the historical records and cannot be dismissed—not if one takes “history” seriously, anyway.

I now giggle inside at my more traditional academic colleagues. They go on and on about “history” until, of course, that history offends or violates their understanding of how time, matter, energy, or the human body works. Then, suddenly and mysteriously, it is no longer “history.”

I am thinking here of two most telling exceptions that prove the rule: the American philosopher Michael Grosso, who has given us a recent study of the “flying saint” Joseph of Copertino (1603–1663) and some of the various parapsychological and philosophical issues this material raises for any thinking person (Grosso, 2016), and the Cuban American historian Carlos Eire and his work on the levitations of the same seventeenth-century Italian friar. Grosso and Eire, I suspect nearly alone among their colleagues in departments of philosophy and history, take Joseph’s *hundreds* of dramatic, sometimes vaguely erotic, and often patently bizarre or humorous levitations as almost certain historical facts that are backed up and archived with massive (mostly legal) records and formally sworn firsthand testimony, which the responsible philosopher or historian must take as seriously as any other such archival deposit (Eire, 2009; Grosso, 2016; Rittgers, 2012). Eire’s conclusion is as simple as it is shocking: “He flew.” *That* is the kind of historiography I most respect.

I came to understand, in other words, that such stories are not always fanciful inferences from delusional dreams (which is what early anthropologists like E. B. Tylor argued about the “primitive” origins of beliefs around the survival of bodily death) or desperate legends of uneducated fools (which is what traditional rationalists and modern-day debunkers want you to believe). Yes, of course, they might well be exaggerated or reframed according to any number of religious agendas (Joseph’s *voli*, or ecstatic flights, certainly were), and they are often simply mimicked or faked, but they also often contain a historical core of truth that might well be the key to so much more.

And—and here is the more subtle part—these very mythical and magical reframings, even the frauds and fakes, are precisely what allows these phenomena to be remembered, passed on, ritualized, mimicked, and so experienced again. The truth behind the theatrical paranormal phenomena needs the trick of ritual repetition to survive the passing of the generations. Fraud and fact are not mutually exclusive but often rely on one another, as in the placebo effect in modern medicine: it’s a trick, it’s a lie, and it works about 30 percent of the time. “Fake it till you make it,” as the popular wisdom has it.

I came to suspect that this same preservation in folklore, ritual, art, architecture, and devotion—that is, *in religion*—is why these same impossibilities are some of the most stable and universal bases from which to

compare religions across cultures and times. As any good comparativist knows, religious doctrines, institutions, scriptures, and rituals differ widely and profoundly. Psi phenomena, as we will see below, do not. Not much anyway. In short, I was beginning to catch glimmers of a new way to compare religions, which, of course, was not really new.

I came to see.

That little sentence sums it up for me personally speaking. Yes, it is a conversion story of sorts, but it is also very much an intellectual process that took untold hours of reading, thinking, talking, writing, and teaching. It involved listening to living people, sometimes close friends, tell stories about precognitive dreams, alien abductions, and literal lightning strikes. It also involved footnotes, bibliographies, and laboring for weeks on end on essays (like this chapter).

On the most philosophical and speculative level, I came to see both these mystical experiences and these rogue paranormal phenomena as intentional signs of the fundamental inadequacy of our present Western worldview. I do not use the word “intentional” lightly here. Actually, I think the rogue events in particular are trying desperately to get our attention. That is why they are so often outrageous, absurd, and unbelievable. *They want us to look.* They want us not only to see but also to see anew. *They want us to change reality.*

SITZ IM LEBEN

So that is what I have been doing for twenty-two years, more or less since I first set foot on the grassy green grounds of the cliff that is Esalen with Ed: I have been working with my colleagues to change reality.

So much for humility.

More recently, and seemingly paradoxically, I moved into what many academics call “administration.” The word is a heavy one in academic-speak. It is usually spoken with some mixture of dread, moral judgment, and a slight sneer. I don’t see it that way. I see it as another kind of listening and writing, a social writing in this case that is also an attempt to “walk your talk” and put some social or public flesh on what we so carefully explain in our books and teach in our classrooms. I see it as a form of intellectual activism and social intervention. I see it is another way to change reality.

And so I spend my working days in a dean’s office at a major American research university—Rice University in Houston, Texas. Like most American research universities, Rice is heavily oriented toward the STEM fields—that is, toward science, technology, engineering, and mathematics. I work “on the other side of campus” in the School of Humanities as the associate dean of

faculty and graduate studies. I oversee about 150 PhD and MA students in art history, English, history, philosophy, and religion, and I help manage about 112 (or so) faculty in too many areas to list.

I mention this information not to sound like a résumé but to put this chapter in professional context—to describe, as my colleagues in biblical studies would have it, the *Sitz im Leben* (or “situation in life”) of this chapter. That place and perspective are important for what I have to say here. Basically, I have a front-row seat from which to watch and ponder the present state of the humanities. I see incredible promise. I also see deep problems. “Crisis” is a word one hears a lot, particularly as I write this amid the COVID-19 pandemic in the early summer of 2020.

Such a crisis (of the humanities now, not the virus) is not recent, and it has not been detected in just one or two places. It is sensed pretty much everywhere and has been observed and endlessly commented on for some time. I have traveled and lectured to about one hundred institutions of higher learning over the past three decades, each time listening carefully to the possibilities, problems, and politics of the place and time. What these travels have taught me is that, whatever this crisis might turn out to be, it is definitely *not* simply a function of the colleges and universities or of this or that region, country, economy, or local culture. It goes much deeper, into the very foundations of Western civilization and its central institutions, including and especially its institutions of higher learning. It is finally a spiritual crisis of the deepest sort.

THE DIAGNOSIS

I think constantly about the humanities as a whole, then. I think about their historical origins in elite esoteric communities: think Plato’s Academy in ancient Greece, the early monastic universities of medieval Europe, the magical practitioners of Renaissance patronage, and the modern populist dismissal of the “ivory tower.” I think about the largely invisible or unspoken assumptions about the human being, the physical universe, and time operative in the contemporary humanities. I think about why they are increasingly ignored or sidelined today in both our academic institutions and our public conversations. But, perhaps most of all, I think about their past and present relationships to the natural sciences.

I have written about the humanities and the sciences a good deal elsewhere, most recently in a little book called *The Flip* (Kripal, 2019). My argument has been consistent and, I would say, fairly simple. Okay, maybe not *that* simple. It will take me four paragraphs to set it up.

Many reasons have been proffered for the much-touted crisis (or crises) of the humanities. Financial reasons (such an education is too expensive), pragmatic reasons (better to get job-oriented training), intellectual reasons (humanist methods and questions are irrelevant in today's world), and political reasons (humanists are too liberal or progressive) have all been explored. Each of these have something to offer the conversation, of course, but I am of the firm persuasion that none of them really get at the core of the problem, which is, at the end of the day, a civilizational and, more deeply still, a metaphysical or spiritual one.

By *civilizational*, I mean to be specific about the cultural source of the problem, to point out that this was not originally a global problem but a local cultural one; that it is in fact fairly recent, really very recent; and that it does not reflect the lived experience of most people in human history. Not even close.

I also mean to point to a broad historical stream of thinking and imagining that we generally (but not very accurately) call "Western civilization," which can be traced, more or less, from ancient Greece and Rome; through early and medieval European Christianity; through the Protestant Reformation, European colonialism, and the Atlantic slave trade; and to the eventual rise of modern capitalism, science, technology, and industry in Europe and its former colonies and, most recently, the rise of democracy and the modern nation-state around the globe. In some basic sense, there is no "West" any longer. It's mostly "the West" now, for better and for worse.

By *metaphysical*, I mean "pertaining to one's conception of reality" or "what one thinks and imagines is real." Some people, particularly some contemporary intellectuals, think that they do not have a metaphysics, that metaphysical thinking is somehow behind them, beneath them, no longer relevant. Be especially wary of such people, for unconscious, unexamined, or unacknowledged metaphysical assumptions are the most powerful of all and, often, the most dangerous.

My "simple" argument, then? I think the humanities are being sidelined today because of the humanities' broadly shared, if largely unspoken, commitment to a Western materialist or physicalist metaphysics. This will hardly come as news to anyone writing in this volume or, perhaps, reading it. What might come as news is how this same materialism has been so destructive of the humanities, mostly by rendering the human literally nonexistent and certainly irrelevant in a technological world of objects and things. The human and, certainly, human consciousness simply do not exist in this conception of reality after all. Indeed, they *cannot* exist in principle.

Believe it or not, most humanists, like most scientists, assume the same metaphysics. They assume some kind of physicalism or materialism. They sincerely believe that they have a clear and convincing answer to the mind—

matter problem: they assume that matter is really real and that mind is really not. They assume that mind is some kind of epiphenomenon or tangential product of mathematically organized matter that is fundamentally insentient or mindless, in a word, *dead*.

Of course, they will code these terribly depressing claims in some kind of elegant language that hides their true and horrific implications. They will write of “dialectical materialism,” “power,” “discourses,” “historical context,” or the “new materialisms,” but they will refuse, absolutely refuse, to imagine anything or anyone outside this strictly physicalist framework. At the end of the day, their day anyway, it is (dead) matter all the way down, and anything transcendent to this material base must be oppressive, must be *bad*.

Oddly, but perhaps not surprisingly, such humanist intellectuals do not live like this at all. They are good people. They laugh. They enjoy good food and drink. They love their children, parents, and friends. They know joy, sadness, illness, desire, and beauty. They speak of justice, which, of course, presumes the sacredness or value of subjectivity, life, consciousness. But when they think or write, they think and write like materialists.

It’s weird.

Humanists, like most scientists, also generally confuse the fantastic successes of the scientific method and its technologies with the settled truth of one contemporary interpretation of that science and technology—that is, materialism or physicalism again. They somehow confuse the existence of air conditioners and laptops with the absolute and exclusive philosophical truth of materialism.

If that sounds like a wild leap, that’s because it is.

This leaping conflation of science, materialism, and philosophical truth is *devastating* to the humanities. It is so destructive because it locks out, erases, and denies in principle both the subjects *and* the objects of humanist studies—that is, the human beings practicing the humanities (the subjects) and the historical human expressions that are being studied and analyzed (the objects).

What are the “humanities” anyway? The humanities are a set of established intellectual practices that embodied forms of consciousness (called human beings) engage in to study other forms of consciousness coded or crystallized in physical cultural products (called art, literature, history, religion, philosophy, language, and so on). The humanities are a diverse set of reflexive practices (thinking thinking about thinking, awareness aware of awareness) and material objects (texts, art works, languages, artifacts) through which consciousness or subjectivity studies itself. Put in my own little mantra, the humanities are *the practice of consciousness studying consciousness coded in culture*.

But—and here is the devastating part—if physicalism or materialism is true, then this consciousness studying consciousness coded in culture is nothing but dead matter deceiving itself about its actual nonexistence or secondary status. Such subjective states might *appear* or *feel* real, but they are really not real, not in any fundamental sense anyway. Such certainty is an illusion.

The logical conclusion is obvious, if almost never drawn: in the materialist or physicalist metaphysic, the humanities are the practices of something that is not really real studying other things that are not really real. *The humanities are nothing studying nothing.*

This is the deepest reason that the humanities are increasingly ignored. People simply assume they are not real. Why study nothing? Why should nothing study nothing?

No one, of course, puts it that way. It sounds pretty awful. That's because it is. But I do not see how this conclusion can be avoided once one thinks about the real-world implications of materialism for two seconds (okay, maybe five minutes).

Such an ontology, I should point out, also in turn produces basic academic, cultural, political, and economic values within which we are now living, as if these things were just the way things are or should be. It partly explains why the STEM fields are so dominant and respected now: because they are about the study of *real things*—that is, material or physical things. (That the subjectivities studying these physical real things or creating the sciences in the first place are not real does not seem to bother anyone for reasons that still completely escape me.) Put in the starkest terms, the politics or hierarchy of knowledge in the university—the pecking order, as we say (on the farm), with the sciences and math on top and the humanities on the bottom—can fairly easily be explained with a single simple metaphysical principle: the more dead something is, the more real it is (and the more it can be manipulated) and, consequently, the more valued is its study (and manipulation).

I hope that this picture strikes you as deeply problematic. Actually, I consider it pathological. But sometimes honestly and accurately describing an illness is the first step to addressing and someday healing it. There can be no treatment without an accurate diagnosis, not an effective one anyway.

For someone, then, who cares deeply about the humanities (or just human beings, including and especially humanists), another conclusion quickly follows: if we want to reinvigorate and renew the humanities (and our humanities), we have to address, firmly and without apology, the dominant ontology of materialism that is presently destroying them from within and from without. Basically, the materialist metaphysics of modernity is our intellectual heart attack. It will do no good at all to start putting band-aids on the body of this patient in the emergency room. We have to address the problem, the heart

itself, which is to say, we have to address the metaphysical or ontological issues. We have to go in deep and fast. Otherwise, the patient is going to die.

Well, maybe the patient should die. Death, after all, can reveal a great deal about the real, as Chapter 1 by Bruce Greyson and Chapter 2 by Jim Tucker in this volume demonstrate in abundance. Maybe the contemporary humanities need to be shaken to their metaphysical core. Maybe they need to have a near-death experience or remember a previous life.

Seriously.

THE REALLY HARD PROBLEM

Ed Kelly has commented on the omnipresence of an aggressively secular materialism in the academy in both the sciences and the humanities. In this volume's epilogue, he mentions with some astonishment that even the study of religion has generally adopted this particular ontology. Alas, Ed is correct.

But there are also movements *within* the present humanities that are opening up immense potential spaces for new thought and new (human) being. There are places where the materialist metaphysics of the humanities is slowly dissolving.

Consider the contemporary philosophy of mind. Philosophers of mind are slowly abandoning the old materialist and reductive "production models" of the mind-brain relationship, as if brain produced or caused mind, period. Some of them are even entertaining panpsychic, idealist, or cosmopsychic options; that is, they are entertaining the possibility that consciousness may not be a product of *anything* but might be a metaphysical "primitive," as fundamental to the universe as space, time, energy, and gravity. Some, including most of the authors in this volume, are even suggesting that consciousness is *more* fundamental than these cosmic realities, that the latter cosmic structures are mathematical expressions or, as Faggins has it, "inkings" of Mind. They are suggesting that the materialists and reductionists have things half right (there *is* a material domain that we, as subjects in the mental domain, can mathematically map with great precision) but also *exactly upside down*. This, of course, is a very old and stable religious idea, particularly evident in the mystical literature.

Not that things are gloriously cosmic now in the departments of philosophy. They can get a bit dull and plodding, to say the least. I get a bit crabby sometimes. In *The Flip*, I called on, I *begged*, philosophers of mind and neuroscientists to stop focusing on ordinary cognition, egoic identity, and perception and instead turn to the extraordinary epiphanies of mind that are so evident in comparative mystical literature and the highly anomalous or

“impossible” physical-mental events of the history of religions. In these two literatures, I argued, we can best approach both the real nature of consciousness (the mystical literatures) and its fundamental, if paradoxical, relationship to matter (the paranormal literatures). I illustrated my points not with classical religious figures, but rather with scientists, medical professionals, and highly trained intellectuals of the modern world. Actually, Bernardo, Federico, and Paul all appear in those pages.

I suggested, among other things, that endless discussions of the qualia of mintiness or redness; of the various modules, templates, and logical syllogisms of human cognition and perception; or of the posited evolutionary functions of this or that psychological adaptation (this is how they talk) will get us only about as far as we have gotten so far—at a philosophical and scientific impasse. The sciences and the conventional philosophy of mind, it turns out, are powerful tools to show us what consciousness is *not*, but they are profoundly inadequate means to reveal what consciousness *is*. They have failed spectacularly in the latter quest, and this failure is itself of immense scientific, philosophical, and spiritual significance.

What David Chalmers famously called the “hard problem” of consciousness, it turns out, will never be resolved by an exclusive reliance on objectively knowing, mapping, or detecting ordinary states of mind, social identity, or common experience, since cognition, perception, personality, and even experience itself cannot *by their very epistemological dualist structures* access or express the true (monist) scope of consciousness (or reality?) as such, much less explain such a thing, which is not a thing at all.

Consciousness itself can access and express consciousness itself, however, and does so rarely but really in comparative mystical literature, most classically in paradoxical, radically reflexive ways—hence Meister Eckhart’s loopy “The eye with which I see God is the same eye with which God sees me” or the famous Zen koan “What is the sound of one hand clapping?” That kind of thing.

If Chalmers dubbed the problem of causally explaining ordinary states of consciousness the “hard problem,” then we might dub the problem of understanding extraordinary states of consciousness the “really hard problem,” which, ironically, is not really that hard on a conceptual level at least (personally realizing it is a very different matter), since it has already been resolved and described many times in the mystical literatures—that is, in the history of religions. In some sense, all we have to do is stop looking where these descriptions are not and cannot be and begin looking where they actually are. We have to stop looking for zebras at the frozen North Pole. We have to go to the hot plains of Africa. We have to go to the comparative study of mystical literature.

There is another, more radical way of saying this, one that John Allison, an emerging philosopher of religion, helped me understand more clearly in the mirror of his own thought and work. What I am really calling for here is not to turn the comparative mystical or paranormal literatures into two more objects of study for the standard academic subject, the latter defined by Enlightenment rationalism, analytic reductionism, and the modern embodied social ego. I am calling for us to take up the nondual epistemologies and paradoxical ontologies of these comparative mystical and paranormal literatures *as our own working philosophical assumptions*.

This is not to argue, however, that we should now abandon our own deconstructive, analytic, and scientific tools, which we have honed so carefully for hundreds of years now. As I will explain more fully below, I am by no means against Marxist, psychoanalytic, feminist, postcolonial, and now cognitive and neuroscientific methods. Indeed, I use them and think with them all the time, and gratefully so. It is rather to say that these analytic and scientific tools are in principle insufficient, that there is something More, Else, or Other left over after their deconstructions. In essence, or non-essence, I am saying that we need to practice these analytic methods as preparations or strategies on the way to something grander, really something cosmic (in the language of my mystical sources, these would become “apophatic” or “saying-away” techniques on the way to a deeper and more fundamental realization that cannot be spoken or described).

This something More, Else, or Other is what I want to call the future of the human(ities), by which I intend both the species and the intellectual disciplines, since I believe that the latter disciplines will help us get to the former species. That is my outrageous intention anyway.

SUM ERGO COGITO

Since writing *The Flip*, I have decided that my own position can best be understood as the exact reverse (or flip!) of Descartes’s famous *cogito ergo sum*, which seems to privilege thinking (*cogito*) as the only reliable proof (*ergo*) of human subjectivity (*sum*). This is a misreading of Descartes, as his famous *cogito* did not mean just “thinking” but something much more basic like sensation or awareness or what we today call consciousness. The historically accurate translation should read, then, “I am aware, therefore I am.”

Still, our present humanities and sciences are stuck with that misreading, with that “I think, therefore I am.” It is my own position that *the exact opposite* is in actual fact the case: that thought, rationalism, and language are all secondary expressions of consciousness as such, which is prior to any person,

thought, experience, logic, or perception. As I have repeatedly insisted, consciousness is *not* cognition, consciousness is *not* culture, and consciousness is *not* the little ego or *any* kind of social, sexual, gendered, racial, or embodied identity. If we understand experience as intentional—that is, as a subject knowing an object—then consciousness is not any kind of experience, either. It is *not* necessarily “intentional,” as the philosophers like to say. I know that is a Western assumption, but I assure the reader that it is not a universal assumption and is fundamentally denied in much Hindu and Buddhist philosophy, which is all about moving precisely beyond or outside this assumption.

I understand perfectly well that it is just a Latin convention, but I find further possibility in the grammatical custom that the *ego* or “little social I” can be left off the *sum* of “I am.” And so, in the comparative mystical literature to which I am referring, the true locus of consciousness is not the ego in the modern Freudian sense, in the neurological illusion of contemporary neuroscience, or in the socially constructed embodied senses of the contemporary humanities and their understandable concern with justice (always in relationship to such social egos). Rather, as Nisargadatta has it in my opening epigraph, this is “the infinite expanse of consciousness in which innumerable persons emerge and disappear in endless succession.”

This Ground of subjectivity, of endless persons, has certainly been given many names. To invoke a few, it sounds more than a little like the “I am who I am” of the divine name that was revealed in Exodus to Moses on Mount Sinai and that has played such a central role in the development of Kabbalah or Jewish mysticism as the sacred tetragrammaton. It also sounds more than a little like the “divine spark,” “Nothingness,” or “Self” behind, beyond, or outside every mental, material, and psychosocial event in the comparative mystical literature.

This is the deeper “I Am” that precedes any and all forms of social identity or personal existence, a fundamental state of consciousness about which only negative statements can be made. As Meister Eckhart had it, it is not “this” (*diz*), nor is it “that” (*daz*). It is that non-place where, as the Meister had it again, “Henry or Conrad” (i.e., social egos or persons) cannot go. Or as the Spanish mystic Juan de la Cruz would later hymn, it is a brilliant, beautiful, divine “nothing” (*nada*). Such a Christian mystical theology, of course, resonates well with the famous *neti, neti*, “Not thus, not thus,” of the Hindu Upanishads and the various forms of “emptiness” (*śūnyatā*) of the Buddhist traditions, even if the local cultural expressions and philosophical developments of these respective traditions and literatures are, yes, very different and historically specific.

Such historical contexts, experiences, and expressions *must* be different given what I have called the Human as Two in my long body of work:

namely, the cross-cultural pattern that specific gifted (or traumatized) human beings have repeatedly experienced themselves both as “two”—that is, as local embodied social selves “above” the horizontal line of the dual-aspect monist graph, with all that implies (from organic chemistry and evolutionary biology to language, culture, custom, and personality)—*and* as embodied forms or expressions of some cosmic Mind that is neither local nor historical, that is beyond or outside space and time altogether, that is “below” that same horizontal line: “space and time are in you, not you in them,” as Nisargadatta (2009, p. 494) puts it. On one level, this is simply another expression of what our Sursem group calls the filter or transmission thesis.

Any model of human religiosity that denies or submerges *either* this obvious historical material immanence (the filter “above” the line) *or* this repeated radical transcendence (the filtered “below” the line) will be inadequate to the full scope and nature of the history of religions and, hence, to the humanities as I am reconceiving them here. It will no doubt explain some things, maybe a great many things, about the social institution that we now call “religion,” but it will finally fail us since it cannot do justice to either what makes a religious event religious (i.e., transcendence or the superground) or what we really seem to be: Two.

In any case, it is precisely through such a comparative practice that I arrive at my own Latin motto: *sum ergo cogito*, “I am, therefore I think” and not “I think, therefore I am.” To assume the latter with the misread Descartes might generate any number of fruitful theoretical approaches in the humanities or necessary activist projects in contemporary society (all of which I would likely heartily support and vote for as another thinking ego or empathic person), but, at least with respect to cracking open the question of consciousness, such assumptions are also very serious philosophical mistakes. They are in fact *obstacles* to true or accurate thinking about this particular question.

This is where things get morally complex. The modern liberal self with rights and integrity, it turns out, may well be precisely what is keeping us from cracking open the question of the true nature and scope of consciousness. Certainly, this complete conflation of the human with the historical, social, and economic actor and this complete conviction in the apparent absoluteness of cultural, ethnic, or racial identity, this exclusive dedication to what humanists call “difference” or “alterity,” is *precisely* what a figure like Nisargadatta considers a form of ignorance (*avidyā*) and locates as *the* problem that must be overcome if we are ever going to understand our true situation.

In his own tough words, such a confusion or conflation of “you” with a body that is born and dies and displays a mind is described as “foolishness” and, again, as “and all such nonsense” (Nisargadatta, 2009, p. 174). Or again, “Reality is the ultimate destroyer. . . . All is one—this is the ultimate solution of

every conflict” (p. 196). The whole notion of “difference,” on which, as we will soon see, the present humanities are based, is simply one gigantic ontological mistake: “Truly, all is in me and by me. There is nothing else. The very idea of ‘else’ is a disaster and a calamity” (p. 197). The Indian guru is not referring to elite academic theorists, of course, but rather to the strong tendency of human beings everywhere and always to identify themselves with their bodies and social egos, which is what the humanities, the social sciences, and the sciences, of course, do over and over again.

If I might invoke another of my favorite mystical authors here, the American science fiction writer Philip K. Dick, we have come to where Dick (2011) arrived late in life in a dream: “In my dream in Canada, Kathy said, ‘One day the masks will come off, and you will understand all.’ It came to pass—and *I* was one of the masks” (p. 376).

The Latin for “mask” is *persona*, by the way.

GOOD REASONS, GOOD PEOPLE

Before I take off my own mask and reveal some thoughts about my own “accidental perennialism” (the accessible ones anyway), allow me first to explain what it is the humanities do so well and why they generally opt for a secular materialism over a traditional religious worldview and are allergic to any and all forms of transcendence. Allow me to explain why the humanities make so much sense.

This good sense needs to be understood, even appreciated and accepted, before we can move “beyond physicalism,” as Kelly and his colleagues had it in an earlier volume (Kelly, Crabtree, & Marshall, 2015) in this developing trilogy and what I take it we are doing in this one. I really do understand that some of these good reasons may strike the scientifically trained or the layperson as too insular, too jargony. But I also think it is important to understand something of these humanist debates and, in particular, how they are generated by goodwill, deep moral sensibilities, and erudite opinion. These are not bad reasons, and these are not bad people. Quite the opposite. These are some of the most studied opinions of the day, and these are profound people.

I think I can best address the positive, life-giving aspects of humanist secularism by expressing myself personally again—that is, by just telling a bit more of my story. I was formally trained in the study of religion for twelve years: four in a Benedictine seminary, where I was exploring a monastic vocation, and eight in a secular graduate school, where I was studying both Hinduism and Christianity simultaneously. Latin, Greek, and philosophy in the seminary and Sanskrit, Bengali, more Latin, psychoanalysis, and

anthropology in graduate school—that sort of thing. My overriding concern through all of these ventures was “comparison”—that is, how one relates the similarities and differences of the world’s religious traditions (of which there are thousands, not a few) to arrive at some general theory of “religion.”

Can one compare? Should one?

Believe it or not, for much of my early career, in the 1980s and 1990s, the general answer in the larger academy was “No, you cannot compare, and you certainly should not.” All sorts of perfectly good reasons were given for these astonishing answers, mostly involving truly awful ways that comparing religions had been done in the past to further some missionary, imperialist, colonialist, racist, or very particular religious agenda.

The critics had a point—lots of them, actually. Historically speaking, “comparing religions” was usually done implicitly in the practices of empire, colonialism, forced conversion, and lawmaking, not explicitly or systematically in a piece of professional scholarship. The violences and genocides that European Christianity enacted on countless indigenous and non-Christian religions around the globe, partly for not living up to Christian theological dicta and rituals or for things like consuming diabolical drinks in their demon-inspired religious rituals (read ingesting psychoactive plants), is a horror story too gory and too long to tell here. And it is by no means restricted to Christianity. The history of Islamic empires, for example, is filled with similar scenes, most recently in Turkey or Anatolia, that brutally ended the lives of some two million Christians (Morris & Ze’evi, 2019). *No* religion—not one in power, anyway—is innocent here.

Here is a fairly typical scene from the early history of my part of the world, this one written by a contemporary historian about how the Spaniards murdered the indigenous Taino people on the Caribbean island that they named La Isla Espanola (of course):

On the island of Hispaniola, in the shadow of the fort Columbus had named for the birth of Christ, specially designed gallows were constructed to hang the Taino thirteen at a time, “In Honour and Reverence” to the “Redeemer and his Twelve Apostles.” The executioners made sure these gibbets were “large, but low made,” so that the feet of the dead almost reached the ground, where “they made a Fire to burn them to Ashes,” oblivious to the fact that this tableau of thirteen souls arranged in a line transformed the classic depiction of the Last Supper into an icon of death. (Manseau, 2015, p. 24)

The modern author here, by the way, is not quoting some sixteenth-century enemy of religion but the Dominican priest Bartolomé de las Casas in his *A Brief Account of the Destruction of the Indies*. The title says it all. Almost. They were not in the “Indies” after all. Not even close.

The situation is as dire with the historical study of the treatment of black peoples by Europe and its colonies. The Atlantic slave trade and its understanding of Africans as chattel or nonhuman property to be stolen, transported in the hot, filthy holds of slave ships, thrown overboard, chained, auctioned and sold, imprisoned for cheap labor, lynched, and killed at will is a story so terrible and so implicated in American history that one is left speechless. And yet humanist scholars have been anything but speechless. They have written countless books and essays on how “race” was historically constructed as a marker of skin color to support and undergird this slave trade and subsequently became a kind of comparative base through which peoples of African descent were treated as pseudo-humans or animals in the New World and used as such. The indigenous African religions were similarly coded as “primitive,” as “witchcraft,” as “savage,” and so on—that is, as not yet European or monotheistic. African Christian and Muslim theologies of conversion and transcendent truth, of course, supported and encouraged such a “comparative religion,” made them feel natural and true.

Within these same so-called advanced cultures, the modern idea of “the human” itself was also socially constructed, mostly by white European intellectuals and often against the dark African or Asian other. In these same centuries, the economies and wealth of countries like the United States were established literally on the backs of black slaves (McDaniel, 2019), many of whom would be cruelly separated from their children or spouses, worked to death in the cotton fields, or hung by trees in front of churches for picnics and other celebrations of white people (there were even postcards to share and celebrate these events). The result was a form of white terrorism to which black peoples and communities responded, often religiously, in an attempt to make personal and collective meaning out of such public cruelty and social absurdity (Pinn, 2003). Slave versus free, black versus white: this was “comparison” at its very worst and most evil.

Humanists naturally and understandably have recoiled at such historical formations and their implicit comparative practices and so have come to see any attempt to relate one religion, people, or culture to another as suspect, as a kind of coded way to assert one’s culture’s superiority over another community or culture. Essentially, they have come to argue that *any* comparison is always a “hegemonic” or colonizing one—that is, that comparison is itself a form of power and conquest, never simply an abstract or fair-minded practice of knowledge.

They have a point.

With the birth of modern anthropology and the comparative study of religion in the late nineteenth century, the modern comparisons got admittedly better and more sophisticated than the grotesque genocidal and imperial ones,

but they were still hardly neutral or without their own problems, and they were still colonizing.

In the late nineteenth and early twentieth centuries, for example, the religions were routinely lined up in a kind of developmental order vaguely inspired by social Darwinism, with the religion of the comparativist (almost always a white European Christian) somehow mysteriously rising to the top of the evolutionary schema and the indigenous nonwhite or “primitive” religions falling to the bottom (of course). Everyone else was somewhere in the middle of the primitive religions (read indigenous Africa, Australia, or the Americas) and the glories of the Trinity, the Bible, and Christian ethics, the latter usually read through a distinct Protestant lens. Interestingly enough, Catholics, who presumably could have said a thing or two about the universality of miracles and saints and the global acculturation of Christianity around the globe, were either exceptionally rare in the comparative conversation or nowhere to be seen. Perhaps they were too busy converting the “Indians” in the Americas. Certainly, their conviction that “there is no salvation outside the Church” (*nulla salus extra ecclesiam*) did not help matters.

Such religious fault lines and colonial horrors were well known and often commented on when I was in graduate school in the late 1980s and early 1990s. This was the heyday of postcolonial theory, which was extremely persuasive in pointing out similarly God-awful histories and deep-seated problems in various Western conceptions of Islam, Hinduism, and the indigenous traditions in particular. Postcolonial theorists showed us convincingly that even when Western individuals turned to “the East” for truth or Asian spiritual teachers promoted themselves as missionaries of enlightenment possessing such truth, they inevitably did so in ways that undergirded and supported the colonial project and the rational and now scientific privileges of the West (more on this concept a bit later).

These same decades also saw the efflorescence of the French philosophers Jacques Derrida and Michel Foucault, who turned to “difference” and “power,” respectively, to analyze pretty much everything as a foundationless “text” and all truth claims as relative forms of “power/knowledge” that worked through elaborate networks of constraint, institutional privilege, and histories of domination (Foucault was a clear student of Nietzsche here). “Truth” was no longer seen as something neutral or even desirable and certainly not transcendent. It was now seen as deeply suspicious and always implicated in power structures that privileged some and deprivileged others, to put it mildly. Accordingly, and for similar reasons, it now became the norm, really the necessity, to focus solely on local difference: on local context, on language, on historical specificity, on what made a particular religious form or social identity distinct and *not* like the others. Difference was in. Sameness was out.

Similar intellectual patterns were evident in any number of other critical theories, including and especially those committed to analyzing and historicizing gender and sexuality—that is, human embodiment. Following first Freud, then feminism, but also again Foucault, these new methods emphasized again and again the “fluid” or nonstable nature of sexual orientation, sexual desire, and gender identity as well as the depressingly consistent ways that men have controlled the histories of the different global civilizations and effectively suppressed female or other gendered voices, bodies, and perspectives.

Such methods in turn gave us incredibly powerful and detailed ways to say very specific and often quite shocking things about religious texts and traditions. We could now see, for example, in the words of my colleague April DeConick (2011), how the Jewish and Christian traditions made the Bible’s rampant misogyny the authoritative cultural norm—how it made the literal hatred of women “holy.” Or we could ask tough questions with Freud and his (in)famous oedipal theory, like why the model or paragon of faith in the three monotheistic traditions is remembered and celebrated as a father’s willingness to kill his own son, from Abraham in Judaism and Islam to God the Father himself in Christianity (Delaney, 2000). For my own part, I spent almost two decades exploring male sexual orientation and male erotic mystical literature in both Europe and India (the latter with the Indian psychoanalyst Sudhir Kakar and the Sinhalese anthropologist Gananath Obeyesekere), concluding that male erotic mystical literature inevitably privileges homoerotically inclined men and renders any male heterosexual mysticism heretical or at least heterodox (Kripal, 1995, 2001b, 2006). These, of course, were just three projects by three scholars. There have been *tens of thousands* of such life projects in the humanities.

In a word, these new detailed, difference-specific historical, psychologically attuned methods *worked*. They gave us new eyes. They allowed us to see. I will *never* forget that. I will *always* be grateful. Freud saved me (long story). Sudhir and Gananath showed me how to think with him in India.

The same sorts of things were happening in the scholarship on mysticism and at the same time. In the 1950s, 1960s, and 1970s, most scholars had strongly emphasized some kind of transcendent sameness with very few exceptions. Accordingly, perennialism (the position that the world religions share a common mystical core of metaphysical teachings) was a popular position among major intellectuals. Consider the novelist and cultural critic Aldous Huxley in the 1940s and 1950s (*The Perennial Philosophy*, 1945), the Indian philosopher and political leader Sarvepalli Radhakrishnan in the 1950s, and the scholar of comparative religion Huston Smith in the 1970s, 1980s, and 1990s. The influence was massive and widespread. It was this

same perennialist stream of thought, for example, that the psychedelic community read and enthusiastically promoted in figures like Timothy Leary and Richard Alpert (Ram Dass) and, later, Terence McKenna and Alex Grey.

Steven T. Katz, a scholar of Jewish studies then at Dartmouth College (now at Boston University), dramatically changed the academic conversation around mysticism with the Oxford publication of his edited volume *Mysticism and Philosophical Analysis* (1978). Katz's essay for the volume, "Language, Epistemology, and Mysticism," rightfully or wrongly, is easily the most influential essay on mysticism published in the past fifty years.

In this essay, the scholar adopted a modern psychological constructivism (by which knowledge claims are always related back to the relative historical and social context) with a distinct Kantian accent (particularly the philosopher's claim that a thing can never be known in itself but only through the a priori categories of the human mind) to advance a robust anti-perennialist "contextualist" position that argued, in essence, that all mystical experiences, far from accurately revealing some shared metaphysical or transcendent truth, as the perennialists had it, are always ineluctably shaped and constructed by local linguistic, cognitive, and doctrinal influences. They are, again, immanent and local, not transcendent and universal. There may or may not be a single metaphysical real, but there is certainly no pure unmediated mystical experience of reality for Katz and his followers. There are only contextual experiences. Experience itself, if you will, is everywhere and always constructed, conditioned, historical.

Put a bit differently, there is no such thing as *the* mystical experience. There are only mystical experiences. Difference was definitive again. Sameness was out again. In Marshall's (2014) eloquently simple terms, mystical experience was no longer seen as a "window" into reality; it was now seen as a "mirror" that mostly just reflected back the psyche, culture, and tradition of the experiencer. In any case, Katz's contextualism became the consensus opinion and, in many quarters, is simply assumed today as the settled truth of things, as the way things are.

This turn to context was revolutionary and, again, incredibly useful. It produced scholarship that was finely grained, oriented to historical and textual detail, and philosophically acute. It also, unfortunately, took the air out of the balloon that brought many people to the subject of mysticism in the first place. It was, after all, no longer quite clear why one would be interested in only local truth claims, none of which were really universal and all of which could be reduced to language, doctrine, ritual, and, most recently, the human brain and its cognitive structures. The perennialists were after the universal cosmic truth of everything. The contextualists were after, well, contexts.

Why bother?

Further scholarship eventually challenged the Katzian position, particularly that of Robert K. C. Forman (1990) on “pure consciousness.” Significantly, Forman (1999, 2011) argued his position textually (through figures like Meister Eckhart), philosophically, and experientially—that is, through his own mystical experiences—something Katz had not done and, I suspect, would never think of doing.

This refusal to draw on one’s own first-person mystical experience in contextualist figures like Katz is not a minor note, and it has real-world consequences. Consider the ecological activist Rachael Petersen (2019). She tells the story of how her clinical depression was effectively addressed through an encounter with “Ultimate Reality” on psilocybin within a formalized clinical trial at Johns Hopkins University. The psilocybin did not just ease her of her clinical depression; it also cured her of her atheism. After all, she could not deny her own experience, and she had known, directly and immediately, “an abiding force that permeated all existence—something that felt conscious, vast, benevolent, eternal, peaceful, and furiously important.” When she approached Katz at Boston University for help with integrating the conversion and cure back into her life, she was met with little more than disbelief and a dogmatic insistence about how she could not have possibly experienced anything metaphysical or mystical—only something “psychological.” That is, alas, about as far as pure contextualism can get one.

Numerous other scholars have stepped in to offer their own voices and nuances to the conversation, some presumably more helpful than Katz’s response to Petersen. The situation today has moved away from these particular debates around historical contextualism and perennialist universalism, but I suspect few scholars are perennialist in the sense that, say, the early Huxley or the mature Smith were (as we shall see, Huxley shifted his earlier perennialist position for a more Tantrically inflected worldview after his psychedelic revelation of 1953). Most scholars, I suspect, would land somewhere in the middle today, in an inelegantly described “incomplete constructivism” that recognizes sameness but emphasizes difference.

Sounds like “neutral” to me. Not very helpful. Who grows up wanting to be an “incomplete constructivist”?

GO FURTHER!

I hope that it is already clear that my general response to the past fifty years of humanist scholarship has not been to abandon or deny the gifts that these decades have given us, but rather *to take them further*. It is not that I think, for example, that we should surrender our acute historical consciousness and

contextualization of all things religious, including mystical experience. It is more that I think that we should take this historical consciousness further and contextualize *our own insistence on contextualization*, whose metaphysical grounding is clearly relative, recent, and no doubt temporary. Immanuel Kant is not God, nor is Michel Foucault or Sigmund Freud or any other theorist.

Allow me a single telling example here, this time with postcolonial theory. The literary critic Edward Said (1978) famously analyzed what he called “orientalism” in a book by the same name (the same year as Katz’s essay). Before Said, the term “orientalism” was a noble and positive one. It referred to European scholars who gave their lives not to European culture but to the study of the languages, histories, cultures, and texts of “the East,” here understood in broad terms and as incorporating what we now think of as the Middle East, South Asia, East Asia, and Southeast Asia. The expression coded an often astonishing linguistic reach, a rich erudition, and, most of all, an existential willingness to step out of one’s own birth culture, usually some form of European Christianity.

After Said’s book, the term turned quickly into a bad name that one scholar used to put down another or pretty much anything produced on “the East” in the past three hundred years. “Orientalism” or “orientalist” now referred to the coded or uncoded ways that colonialists and Western scholars worked to colonize Middle Eastern or Asian cultures by relegating them, consciously or unconsciously, to lower rungs of an imagined civilizational ladder, always with European culture and rationalism at the top. A focus on “mysticism” or “mythology” was a particularly obvious example of this most dubious “orientalizing.” Or so ran the argument of Said and his successors.

They have a point. Remember the Taino of the so-called Indies? There are now thousands of essays and books on the largely unconscious orientalist structures of European religious, economic, political, and scientific engagements with Islam, Hinduism, and Buddhism in the Middle East and Asia, and they work very well and often in tandem with critical race studies.

Unfortunately, such well-meaning intellectuals and good people usually overlook or are simply unaware of a great deal of history to argue their otherwise good reasons. It is just not this clear-cut. The historical truth is that gnostic, esoteric, and mystical currents of thought, comparative practice, and what the postcolonial critics dismiss as “orientalism” are in fact ancient and globally distributed and *in no way* originated with either nineteenth-century colonial anthropology or, for that matter, European colonialism of any era. We conveniently forget, for example, that Plotinus tried to go to India after his mystical awakening to *Nous* and his realization of the One *in the third century CE* or that the Gospel of Matthew clearly places the cultural home of the *magi*, or magicians, “in the East” in the first century. Others have

explored in depth this very ancient and very stable pattern of civilizational conversation and religious conviction, tracing it as far back as ancient Greece (Halbfass, 1988; McEvilley, 2001).

What we now call (usually with a moral sneer) “orientalism” is thus not just a colonial invention (although it certainly took on specific political and ideological forms in various European colonial and imperial projects, the early comparative study of religion being one of them). It is *an actual experience* and a reasonable conviction grounded in some of the most influential texts and figures of Western history. At least with respect to Europe, wisdom really does come “from the East” and long has.

THE COMPARATIVE STUDY OF MYSTICISM AS A MYSTICAL TRADITION

It is not just that we cannot see far enough into the past, then. It also the case that we can be blinded to our relative present, which is itself strange (and wonderful) beyond measure. To take just one example, I have been arguing for the mystical experiences and paranormal fascinations of twentieth-century scholars of mysticism as the deeper sources of their comparative practices since the turn of the millennium (Kripal, 2001b). Advancing this thesis further, I have also made a case for the gnostic superstructures of at least some critical theory, particularly Feuerbach’s dialectic reductionism, some radical forms of psychoanalysis, and comparison itself (Kripal 2006).

That a discipline within the humanities like the study of mysticism might display all sorts of resonances with earlier gnostic and mystical thought is hardly an original idea. Hans Jonas (1958) made the case for the powerful parallels between modern existentialism and ancient Gnosticism in *The Gnostic Religion*. Moreover, we know that key modern intellectuals as diverse as F. W. H. Hegel (Magee, 2001, and Chapter 6 in this volume), C. G. Jung (Jung, 2016), Albert Camus (the very titles of *The Stranger* and *The Rebel* drip with gnostic undertones) (Lanzillotta, 2020), and Harold Bloom (1996) have been deeply inspired by ancient Hermeticism and Gnosticism. As I noted earlier, similar patterns are obvious in the history of science. Ian Stevenson, the psychiatrist who initiated the study of children who remember previous lives at the University of Virginia in the early 1960s (now led by Jim Tucker), was raised by a mother with clear Theosophical convictions, and some of Stevenson’s own metaphysical convictions, particularly his central sensibility that consciousness and personality are not reducible to brain, were likely inspired by psychedelic experiences (Stevenson, 2013).

Humanists are trained to turn their critical gazes back on themselves. Accordingly, I have not exempted or excluded the mystical roots of my own theorizing of mysticism from this particular gaze. From *Roads of Excess* on (Kripal, 2001b), I have written explicitly and many times of what I call simply “that Night.” By such a simple phrase, I mean to point back to early November 1989, when I was living in Calcutta and personally immersed in the fall festival of Kali-Puja, a major ritual cycle in West Bengal dedicated to the Hindu goddess Kali, who is depicted in the spectacular art as “standing” on her prone, sleeping, or meditating husband Shiva, her four arms outstretched in various poses, her tongue sticking out in something between fury, ecstasy, and arousal.

I went to bed one night in the middle of the festival and did not wake up. Or, better, I woke up, but my body did not. A conscious intelligent energy emerged from, well, from *somewhere*. As I lay there on my back, like Shiva, this Force, Power, or Energy (*shakti*) interacted with me erotically, spiritually, and physiologically all at once (maybe it came from “below” that horizontal line). I thought I was dying. Actually, I thought I was being electrocuted or having some kind of heart attack. It was *that* physical. It was *not* just a dream, though, yes, of course, it was clearly dreamlike.

Maybe I was dying or almost dying. Then the Conscious Energy imploded into my heart region, and I experienced myself floating to the ceiling, as if drawn “up” by some kind of invisible metaphysical magnet. Eventually, I got “back” and regained control of my body and muscles. I now felt this intense and immense Energy in my body—in my cells, as it were—that was now somehow encoded with too many thoughts and insights to manage or express consciously. It was *terrifying*. And it was *great*. And the event had some very practical results: my little library of books written over the past thirty years, each and every one of them still trying to express something, anything, of whatever *that* was.

Honestly, if you asked me today what that Night was about, I would say that I think it was all my future books flowing into me, at once, at that moment. I could not understand them, of course, because I had no context for them, but they were all “there,” all at once, in that Night. It was this future flowing back into that past, which was my present in November 1989. It was one gigantic premonition, inspiration, precognition, or time loop (Wargo, 2018).

Partly, maybe largely, because of this single autobiographical event, what I have been arguing for more than two decades now is something very similar to what Bob Rosenberg argues in Chapter 3 in this volume with respect to the actual historical data on precognition and other mind-bending parapsychological phenomena. I have been arguing that the professional room called the

study of religion is very much like the wild psychokinetic bedroom scene in the film *Poltergeist*. The rest of the house looks normal enough as you walk around in it, and the parapsychologists seem unduly proud of getting a tiny bit of empirical proof for psychokinesis—with a child's toy no less. But just open *that* door, and you quickly realize otherwise. Everything is flying about. The place is completely haunted. The place is *wild*.

But it is wild *for a reason*. Such paranormal activity, I now firmly believe, is essentially performative. The history of religions is theater. It is art. It is real-world cinema, paranormal special effects and all. I do not, of course, share the specificities of the religious imaginations and historical conditionings of my materials and friends (i.e., the movies), but it is difficult, really impossible for me, not to take seriously the general drift of the force and direction of these phenomena (more on that below before I end). In any case, that is the poltergeist bedroom I live in and have lived in for thirty years since that Night. I understand and deeply appreciate the rest of the humanities house (Nietzsche, Freud, feminism, Derrida, Foucault, Katz, and all), but I cannot forget that bedroom. It certainly does not want me to forget it (hence its special effects).

I have advanced these ideas in many places and for some time now because I have long considered the argument, which is itself something of the norm these days, that the comparative study of religion is little more than a colonial product emerging from Protestant theological categories and missionizing activity to be partially or relatively true but also incredibly shortsighted and deeply distorting. Such a position is itself an ideology, of course, and one that serves materialist metaphysical systems, cultural exceptionalisms and nationalisms of all sorts, and monotheistic logics (Katz's Judaism has always struck me as definitive of his project). It serves such ideological goals because it essentially prevents comparison across cultural and temporal boundaries (since such comparisons must be just more colonialism and Protestant projection), denies any shared human foundation of the religions, insists on the "uniqueness" of each "world religion," and attempts to silo off the religions both from one another and from robust forms of comparison and theory. In essence, it denies our shared humanity.

But that is where we are today. The humanities, at least in their more public and orthodox forms, want to shun, ignore, and hopefully eventually erase what magically gave them birth—that is, a profound early interest in the occult, the psychical, and the paranormal (Josephson-Storm, 2017). And I do not mean "what magically gave them birth" metaphorically. I mean it quite literally. Magic, after all, is all about making connections between things that are not mechanically connected. So, too, is comparison. To compare is to practice magic. To practice magic is to compare.

PERENNIALISM AND THE PRESENT

When I voice thoughts (or complaints) like these, I am often accused by colleagues, particularly senior ones, of advancing some form of perennialism; that is, I am accused of belonging to the Dark Side, against which such colleagues apparently believe they have to fight (remember, it is *all* “difference” now). I can see them activating their light sabers the moment I open my mouth. They are friendly and collegial about it, mind you, but I can still see and hear the light sabers switching on.

I have come to conclude after many such conversations that the Dark Side that they perceive in my words comes down to my positing of some form of transcendent consciousness—that is, one (or One) not completely determined or delimited by spatial or temporal parameters—that is potentially available in any human culture at any historically recoverable time; that there is, to put it simply, a nonhistorical presence being filtered by the historical filters; and, to speak in theological language for a moment, that our shared humanity often displays itself as a shared divinity. In any case, after almost four decades of study now, it is difficult, really impossible, for me not to posit that there may well be something about the human being that is not quite “in time,” something that is and is not “historical” in the ways we generally use that expression.

To make matters worse (or better), I also happen to think that consciousness as such is entirely *sui generis*. I use that Latin phrase intentionally to write back against all those who have used the same phrase in my own field (the Latin expression has become a kind of punching bag) to beat back (or up) anyone who would dare propose that there is something essentially “religious” about religious experience, something not finally reducible to “this” or “that,” to “here” or “there.”

At the same time, oddly enough, any attempt in neuroscience or the philosophy of mind to explain consciousness by reducing it to something more basic has failed spectacularly. One can go on for an entire career, of course, demonstrating how the expressions or experiences of consciousness are culturally, historically, politically, linguistically, and neurologically shaped (all true), but no one has been able to explain consciousness itself in terms of something else. *Anything* else. That is why it is so hard to give an adequate definition of consciousness. There is nothing else it is like.

But do such convictions constitute a perennialism? What is perennialism? Am I a perennialist? Let me get a bit more specific now.

In the contemporary study of religion, perennialism is most commonly framed as the thesis that particular sets of teachings about some specific metaphysical absolute are the true “mystical core” and final goal of all world

religions. This metaphysical core, it is claimed, is what the religions, their doctrinal systems, and their mythologies intend, are all ultimately about, where they are headed, what they are pointing or gesturing toward. In short, perennialism is an argument about the *telos* of any and all sufficiently developed religions and their doctrinal or teaching systems. These teachings are called “perennial” because they supposedly arise over and over through (*per-*) the years (*-ennial*), like the flowers that pop up each spring.

If one reads long enough in the literature, this doctrinal core proclaimed by self-identified perennialists usually comes down to some kind of mystical union, identity, or nonduality between the human and the divine, be it framed in monotheistic or Buddhist or Hindu terms, depending on the specific author and his preferences. And, yes, it is always a “he,” with only a few rare exceptions, like Madame Blavatsky and her Secret Doctrine.

There are further complexities and important differences here. Traditional perennialist writers like the French convert to Islam René Guénon often display distinctly antimodern tendencies in that they place all real truth in some past revelation and are deeply suspicious of democratic forms of society that level out the special case and privilege the common man or woman. A strong conservatism, or “looking back,” defines their thought. Accordingly, they can also be antiscience and openly antievolutionary since they want to privilege eternal verities over any mere historical construction or fundamental biological change. The American comparativist Huston Smith sometimes expressed such antievolutionary views.⁷ Not surprisingly, he was also set against any attempt to uncover the sexual and gendered dimensions of mystical experience: predictably, he called my own early work in this standard humanist area of research “colonialist” since it happened to be focused on a Hindu saint and argued that scholars of religion should never talk about such sexual matters (Kripal, 2001a). In short, he used one humanist method (postcolonial theory) to beat back another (psychoanalytic theory).

Not every perennialist thinker, of course, shares all of these features. Aldous Huxley, one of my own key inspirations, was clearly a perennialist thinker from *The Perennial Philosophy* (1945) through *The Doors of Perception* (1954) to his final novel *Island* (1962), but he was certainly not antiscience or antimodern in these senses. Nor was he an intellectual prude (although he resisted linking evolutionary biology to his own mystical philosophy). He also did not think that all religions lead to some perennialist doctrinal core. Quite the contrary, he was of the opinion that particular kinds of religion, devotional Christianity among them, actually work to *prevent* perennialist awakenings.⁸

Huxley also changed his mind as he encountered different traditions, knew different mystical states, and encountered new paranormal phenomena (he

was friends with Eileen Garrett, the Irish medium tested by J. B. Rhine). For example, whereas *The Perennial Philosophy* was heavily ascetic and essentially an English reworking of ascetic or monastic Advaita Vedanta, *Island* was profoundly erotic, psychedelic, and openly Tantric in orientation and intention. And as Laura Huxley told me before she died, *Island* is where Aldous put what he really thought. In many ways, the American counterculture was an attempt to put into practice Huxley's psychedelic-erotic Tantric *Island*. It didn't work.

Or did it?

On a more abstract professional level, perennialism is seen today as a kind of anti-history and as a refusal to take the humanities seriously. As I explained earlier, in the conventional orthodoxy of the humanities these days, there is *only* difference, or at least that is all we should be concerned about. Sameness is dangerous. Sameness is "hegemonic." Sameness is bad. And perennialism, of course, is *the* philosophy of sameness.

I understand that I am exaggerating, but not by much.

The problem, of course, is that sameness does not go away because elite academics have decided it is bad or because, yes, logics of sameness have been used for violent, imperial, colonial, and racist purposes or because, yes, difference is also really, really important. As I have repeatedly argued, a badly used idea is not the same thing as a bad idea. Indeed, *any* idea can (and usually is) used very badly at some point—and probably many points—in history.

Such a critique also conveniently ignores the historical fact that elite academics often have profound mystical and paranormal experiences of sameness and paranormal connection in or outside the study of religion. This is a return to my earlier argument about the mystical roots of the humanities. Jacques Derrida (2007), the French king of difference, for example, wrote about telepathy in appreciative and awed terms toward the very end of his life—he clearly considered it real and a most potent example of his deconstruction of subjectivity since it revealed in dramatic ways that the subject is not bound to the cavity of the skull, that the subject is in some basic sense "headless." Freud had come to similar conclusions with respect to telepathy and wrote six papers on its expressions as "thought transference" in the psychoanalytic session and in dreams. Moreover, Michel Foucault, who did more than anyone to relativize all forms of knowledge as forms of power, claimed to have known "Truth" (capital T) on an LSD trip in Death Valley while he was teaching at Berkeley, according to Simeon Wade (2019), who was there. Difference is difference. It is not some absolute cosmic law written into the stars (which all work the same, by the way).

I certainly do not want to deny difference, then, but I also do not want to deny sameness. I think we need both to even speak of the human, much less to

think in sophisticated and rigorous ways. In terms of my own thought, there are two different dimensions of human religious experience in which sameness clearly appears, if always, yes, of course, in a mediated way: in (1) paranormal phenomena and in (2) mystical experiences of consciousness as such.

I do not want to dwell on the topic here since I have elsewhere, but I do not think paranormal phenomena are amenable to the constructivist or historical convictions, not at least in any full way. They are remarkably similar across all temporal and cultural boundaries. Rick Shweder, the cultural anthropologist, has noted the same with the data on children who remember previous lives. These memories do not follow clear cultural or religious lines, contrary to any absolute constructivist or contextualist thesis (Shweder, 1991; Tucker, Chapter 2 in this volume).⁹

The same is true with phenomena like “telepathy” or “poltergeist” phenomena. These are new and culturally specific words, of course (1882 English and sixteenth-century German, more or less, respectively), but new and culturally specific words that name very stable human experiences that can be located in any historical period that is sufficiently recoverable. I can show you “rattling” or “dragging chains” in Victorian ghost stories. I can also show you “rattling” or “dragging chains” in an eighth-century Chinese Buddhist Ch’an or Zen scriptural text, *The Sutra of Hui-Neng*, often simply called *The Platform Sutra* (Price & Mou-lam, 1990, p. 155). The dragging chains signal the same thing in both contexts, moreover: the dead as upset or angry. The eighth-century Chinese Buddhist story is downright gothic: a thief tries to cut the head off a dead Buddhist master preserved in a shrine.

The same can be shown with any number of paranormal phenomena: mind reading, precognition, bilocation, the separable soul, the double, spherical souls, floating discs, small spectral humanoids, you name it. To use the categories of Ann Taves (2016) (in a different sense than she intended), these shared universal human potentials appear to be the “building blocks” of religious belief and tradition. They are not yet religious tradition or institution, and they need not be, but they can become so with the right historical, social, and political contexts. *Context matters* and matters a great deal, but so do the globally distributed and universal paranormal phenomena.

On a more fundamental and, I suppose, more “perennialist” level, I also happen to think that human beings, anywhere at any time, can, have, and do experience consciousness experiencing itself—that is, consciousness as such—and that these very special moments take on very similar paradoxical structures and characteristics, especially around “light” and “nothingness.” I am thinking of moments like the *nihil* or “Nothing” of Eckhart, the annihilation or “nothingness” (*nient*) of Marguerite Porete, the *fana* or “annihilation” of Sufi literature, the *nada* of the mystical theology and remarkable

drawing of Mount Carmel by St. John of the Cross, the *anattā* or “no-self” and *śūnyatā* or “emptiness” of the Buddhist traditions, the *Ain-Soph* or the “No-End” or “Infinite” of the Godhead in Kabbalah, and countless less classical moments, like Emerson’s famous “transparent eye-ball” experience in which he could proclaim, “I am nothing. I see all.” We could go on here for as long as we want to go on.

THE ACCIDENTAL PERENNIALIST

Having said (really written) all of that, I do not think for a second that all of the world religions teach, lead to, intend, or are about the same thing, be it the Plotinian One, the biblical God, the Hindu Brahman, Buddhist emptiness, the Chinese Dao, or anything else. It is not that I deny that particular readers can derive such a system from highly selective and often eccentric readings of past scriptural texts. They can, of course. Indeed, as we will see in a moment, I find these eccentric readings highly significant, but I do not confuse them with what the religions as social systems are about or intend. On the contrary, I consider these eccentric rereadings “accidental.”

But, clearly, such hermeneutical strategies and free associations do not represent the intentions or meanings of the scriptural texts themselves or, for the most part, their historical communities and reception histories. Sacred scriptures, taken as wholes now, do not agree about much of anything. Religions are not the same. Not even close. Perennialism in this substantive or doctrinal sense (“what they teach”) is just *wrong*. It is false. It is bad comparison. We are not all journeying up the same mountain by different paths. We are all journeying up different mountains, of which there are hundreds of thousands or millions (or billions), not six or seven in a college textbook. Religious difference is definitive for religious communities and human personalities. That is why they are different communities and people and why there is so much religiously motivated violence in the world.

No argument with my colleagues in the study of religion there.

But here is the thing. In many of these religions or on many of those mountains, some rare individuals (like Plotinus, like Ibn al-Arabi, like Madame Blavatsky, like Aldous Huxley, like Huston Smith, and certainly like Bernardo Kastrup, Paul Marshall, or Federico Faggin) will awaken into or be thrown into states of consciousness or soul that do indeed look *a lot* like those encoded in particular passages of particular religious or philosophical texts. They are not wrong to see and say this.

In such mystical states, consciousness reveals itself as something fundamentally different than culture, cognition, or personality. Consciousness

recognizes itself across cultural and temporal boundaries *as the same*, even if this sameness is always mediated by the cultural or psychological filter through which it is shining. To return to and riff on the mountain metaphor, consciousness appears to such a person as the space or sky around all of those very different mountain-religions. None of them own the sky. None of them contain it. All of them are contained within it. Suddenly one flips and realizes, with Nisargadatta (2009), that “space and time are in you, not you in them” (p. 494).

When these flipped individuals experience this shared sky of consciousness, they can and will make their local religious idioms work to express the sky’s spaciousness and shining nothingness.¹⁰ They will try to make their hard rocks express the luminous empty sky. This is no easy thing, of course (since a rock is not the sky), and they will often have to chip away at those rocks and twist those local paths and idioms beyond all recognizable forms to make the mountain match the sky. In many cases, they will actually reverse or turn on their heads the symbolisms and doctrines of the religions to which they happen to belong by accident of their births and social contexts. And they will get into trouble, sometimes a lot of trouble.

Again, to stick to the world religions, just go read Shankara’s commentaries on the Upanishads. Or Meister Eckhart’s German sermons on the Gospels. Or Ibn al-Arabi in *Bezels of Wisdom* on becoming “a receptacle for the forms of all beliefs.” Or the kabbalistic hermeneutics of the *Zohar*. Or William Blake’s “The Everlasting Gospel.” Such texts look almost *nothing* like “normal Hinduism,” “normal Christianity,” “normal Islam,” or “normal Judaism.” Precisely. That is because such readings are not normal at all. And they are Nothing. They are the results of individuals being awoken into the sky of consciousness and then trying their best to make their own mountain of religion express the sky of consciousness.

They can’t, of course. But they try anyway, and sometimes they succeed to the extent that their eccentric readings are preserved by their own communities and become orthodox (as with Shankara or more modern figures like Ramana Maharshi or Nisargadatta Maharaj). At other times, as we see in the case of Eckhart, Marguerite Porete, or some contemporary Sufi communities under violent assault by fundamentalist forms of Islam, their readings are too much at odds with particular religious authorities, and so the authorities attempt to suppress their memory—sometimes through institutional means, sometimes through deadly violence. In one Egyptian case in 2017, more than two hundred people were either blown up or gunned down by Muslim fundamentalists as they fled their Sufi mosque (Gottschalk, 2017). Christian authorities melted Marguerite in Paris in 1310—in a public square, no less—so that people could watch. The pope condemned Meister Eckhart as he was

dying and sent his teachings into virtual oblivion for centuries until they were recovered and reassessed in a different cultural and temporal context—that is, until they could be heard. And so on.

Blake, a true perennialist (“All Religions Are One,” as he had it in one of his short pieces), was luckier a few centuries later. He died in peace—or at least not on a pile of burning wood in a plaza. He also had my accidental perennialism just right in his last, unpublished, incomplete “The Everlasting Gospel.” Here is a typical reversing line: “Both read the Bible day and night; but you read black where I read white” (Blake, 2011, p. 9). That’s what it took for him to fit the sky into the mountain. He had to reverse pretty much everything about the mountain, turn it upside down or inside out. Blake had flipped.

The accidental quality of such flips in relation to their religious surrounds (absolute contextualism is just wrong: there is *no* necessary relationship between mystical experience and religious context) and the subsequent force-fitting of these mystical hermeneutical strategies is precisely what is “perennial” about especially expansive revelations of consciousness as such. *This* is what makes them so “secret” and, often, so dangerous. And *this* is why mystical forms of consciousness are so common in the history of religions: *not* because that is what the traditions or cultures are about (they ain’t), but because that is what a human being is potentially capable of becoming, what she or he really is anytime anywhere. So, yes, all human beings can experience similar forms of consciousness as such, but this does not mean that they will (they generally won’t) or that all the religions are somehow pointing to this truth or universal potential (they aren’t).

In this, I agree with a colleague like Paul Marshall (2014), who wants to draw a bright line between experiential essentialism (the claim that there is some commonality of experiential form and content across the traditions) and perennialism (the traditionalist claims to some universally true core teaching or metaphysical doctrine). I wholeheartedly affirm the former essentialism (although I would not pick that word) and wholeheartedly deny the latter perennialism. This is why I want to speak and write of an openly paradoxical, loosely fitting, messy accidental perennialism—not to affirm traditional perennialism but to subvert and move beyond *both* it *and* the reigning contextualism.¹¹ Again, such an accidental perennialism is not what the historical religions have been about. Indeed, it is precisely what they have *not* been about.

CONCLUDING THOUGHTS ON A SENTIENT ALIEN PLANET

I have certainly avoided the term “perennialist” altogether to express my own thought and work, mostly because I think it obscures more than it

illuminates. I have been much more comfortable with the moniker of “intellectual gnostic,” which I have used as a self-description for fifteen years now (Kripal, 2006, 2020).

Such a nerdy expression signals a position that recognizes the reality of direct immediate mystical knowledge (*gnosis*) of the soul, or what I would now call consciousness as such. It also signals an erudite appreciation of how this immediate knowing has been preserved and passed on in the rich particularities and baroque mythologies of the history of religions. It also encodes and accents how such a *gnosis* has been persecuted and for the most part rejected and actively suppressed by the religions, particularly by the Western monotheisms and now materialisms. It does not see “religion” through rose-colored glasses, as I believe some perennialists have tended to do (particularly Huston Smith). It does not idealize. It recognizes its own social fragility, marginality, esotericism, and subversion.

Finally, such an intellectual Gnosticism relishes in historical detail and literary beauty, in what my colleagues rightfully hymn as “difference.” Indeed, an aesthetic appreciation of the intellectual gnostic as writer lies at the heart of such a confessed identity. Harold Bloom’s (1996) erudite literary criticism and frank confessions of his own gnostic awakening come especially close here. But so does April DeConick’s (2019) gnostically inspired work on the ancient rise of Gnosticism and contemporary New Age movements as revolutionary countercultural spiritualities. Obviously, I could go on here for some time. My point? That I just find this label more accurate and more honest.

Such gnostic nuances matter—and matter a great deal. When, for example, I imagine the wild sci-fi displays—special (paranormal) effects and all—of a shamanic journey in the American Southwest, a Marian apparition in Portugal, a Hindu Tantric ritual in Kolkata, a Victorian séance in London, a Tibetan Buddhist *thangka* hanging in Kathmandu (or California), a channeled revelation on the phone in New York City, an alien abduction in the Hudson Valley, or a Pentecostal possession of the Holy Spirit (or of the Devil himself) in a West Texas church, I am not imagining some identifiable stable perennial substance behind so many local, unnecessary symbolic displays. I am imagining a Conscious Nothing projecting, emanating, materializing Itself out of Itself in whatever local codes and customs happen to be available, just lying around, as it were (here, too, the process is entirely “accidental”), so that It can speak to the locals in limited, fallible, sometimes socially dangerous, and always psychosomatically and historically inflected ways. This Conscious Nothing *is* that display, and It is *not* that display.

If this strikes you as paradoxical, that’s because it is. That is the Human as Two.

Finally, in my most speculative moods (is that not what this volume is about?), I see the transcendent openings of mystical literature and psi phenomena not just as intentional signals of the fundamental inadequacy of our present Western worldview, which is how I began this chapter, but also as nondual signals of, *or from*, some future humanity, which is how I want to end this chapter.

I do think that these transcendent openings and rogue phenomena are trying desperately to get our attention. That, again, is why they inspire so much writing, thinking, and scholarship, not to mention religions. Yes, they want us to look, to see anew. When I set down the mask of the academic and am most honest with myself, however, I also think that these strange events want to change us. I think they are trying to evolve us. Or better, I think, through them, *we are trying to evolve ourselves*.

The British philosopher Jules Evans has perhaps come closest to my own intentions by comparing my comparative thought to the sentient, morphing, haunted planet of Stanislaw Lem's science fiction classic *Solaris*. For Evans, what I have been trying to articulate with eccentric categories like the mystical, the imaginal, and the paranormal is the likelihood that "our relationship with Being is reciprocal, it responds to how we relate to it, manifesting in the attitudes or stories we project, playing with them, making them real"—hence *Solaris the Metamorph*, as Lem calls it, which Evans glosses as "the magical force that projects our dreams back to us" (Kripal, 2017, pp. 409–413).

This sounds about right to me as long as we do not get caught up in more dualisms between the experiencer and the experience, between sameness and difference, between the universality of consciousness and the infinite local forms of its real projections, between a traditional perennialist universalism and an absolute historical contextualism, between us and the magical force projecting our dreams back to us. It is all One thing unfolding or evolving Itself out of Itself. It's *all Solaris*.

This, I suspect, is why Evans turned to Lem's weird planet for his major metaphor—because there really is no way to cleave or separate the experiencer from the experience, the projector from the projected there. Nor is there any real separation between the subjective and the objective, between the mental and the material. On *Solaris*, as on Earth, physical objects and historical events can *physically* play out the intentions, dreams, desires, fears, and unconscious dynamics of human beings, as Nietzsche recognized in *Thus Spoke Zarathustra* and as I have tried to demonstrate in my recent body of work, from *Authors of the Impossible* (2010) to my silly punning fox story earlier. This "writing the paranormal writing us" or, if you prefer, this "us evolving us" is the reflexive, paradoxical nature of *Solaris*.

It is also, I dare say, the future of the human(ities).

NOTES

1. Nisargadatta (2009, p. 505).
2. Kaufmann (2000, p. 757).
3. Dick (2011, p. 10).
4. On the evidential or empirical quality of some types of mystical experiences, I have been especially influenced and taught by Paul Marshall (2005, 2015, 2019).
5. I have made a case for the primary historical influence of the Tantric traditions over Advaita Vedanta, what I call “from Vedanta to Tantra,” in the history of the Esalen Institute and the American counterculture more generally in Kripal (2007). I have explored similar resonances with respect to the *siddhis* or “superpowers” in the Tantric traditions and modern parapsychology in Kripal (2011a). I continue to think that the American translation of the Asian traditions has been primarily a Tantric translation and selection process.
6. For some reflections on the Sursem meetings, see Kripal (2012). For more autobiographical reflections on these years and particularly the persons of Michael Murphy and Ed Kelly, see my two chapter essays, “That Other Night: The Future of the Body and Evolutionary Esotericism” and “The Filter Thesis: The Irreducible Nature of Mind and the Spirit of the Humanities,” in Kripal (2017, pp. 169–227).
7. Multiple personal conversations with Michael Murphy.
8. Personal conversation with Dana Sawyer. See also Sawyer (2002).
9. Rick Shweder’s “reality-positis” and post-Nietzschean proposal of “multiple objective worlds” are also deeply resonant with my own work and convictions (Shweder, 1991).
10. I am referring here to what happened historically—that is, before the modern era of mass transportation and telecommunication. Today, of course, such individuals need not rely solely on what happens to be accidentally lying around. They can turn to a hundred, a thousand, different cultural texts and resources to fashion their voice. For a perfect example of this much maligned but perfectly reasonable spiritual art of collage, consider Tolle (2004, 2005).
11. I am indebted to Linda Ceriello for the phrase “accidental perennialist” via her own expression “accidental mystic.”

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II

MIND BEYOND BRAIN

Surveying the Metaphysical Landscape

Paul Marshall

“Would you tell me, please, which way I ought to go from here?”

“That depends a good deal on where you want to get to,” said the Cat.

—Lewis Carroll, *Alice’s Adventures in Wonderland*¹

The phenomena discussed in Part I of this volume—near-death experiences, cases of the reincarnation type, and precognition—present a challenge to common assumptions about what is possible and what is not. These assumptions, which philosopher C. D. Broad called Basic Limiting Principles, impose restrictions on consciousness by making it entirely dependent on the brain and by tying perception exclusively to the bodily senses. Precisely how these assumptions took hold of the modern imagination is no doubt complicated since they emerged with the decline of religious authority and the rise of modern science and skepticism, a transition as much social and political as intellectual. But from a philosophical perspective, three factors stand out: an *epistemological* commitment to a narrow empiricism that grounds knowledge on sense perception alone; a *metaphysical* claim that nature is fundamentally material, enshrined in materialist and dualist philosophies; and a *naturalistic* exclusion of supernatural agencies from the natural world, including soul or mind if understood as distinct from nature.

While these factors most likely aided science by focusing attention on the readily observable and measurable, they are not self-evidently true and are open to challenge. Indeed, it is possible that they may ultimately hinder scientific understanding by excluding important data from consideration and closing off potentially fruitful lines of theory and research. There is evidence, painstakingly collected and evaluated, that points to the genuineness of at least some of the challenging phenomena, including psi and postmortem

survival (Cardeña, 2018; Cardeña, Palmer, & Marcusson-Clavertz, 2015; Kelly, 2015a; Kelly et al., 2007). These phenomena—and others not so open to evaluation, notably mystical experiences (Marshall, 2011)—are “wild facts,” to borrow William James’s (1890a) term, marginalized but potentially revolutionary phenomena that have yet to be domesticated by integration into an established scientific system (p. 362). Wild facts, contrasted with “accredited” or “orderly” facts, tend to be ignored or rejected, but when they are embraced, they can be transformative, enlarging and deepening science, as David Presti discusses in detail in Chapter 9 of this volume. James (1902, 1986) himself attended to some of the wild facts through his involvement in psychical research and the study of mystical experience. The expanded empiricism he pursued with Frederic Myers and others—attentive to a range of experiences and intended to advance science rather than oppose it—was a guiding principle behind *Irreducible Mind (IM)*, as Edward Kelly explains in his “Background and Overview” in this volume. The basic question addressed in *IM* can be stated thus: *What kinds of phenomena challenge beliefs that consciousness is entirely dependent on the brain, is a product of the brain, or is nothing but the brain?* Put more concisely, what kinds of phenomena challenge materialism? The most conspicuous challenge to materialism is, of course, everyday experience, and in recent years there has been a resurgence of interest in the centuries-old mind–body problem, rechristened “the hard problem of consciousness” to indicate more precisely where the core problem lies—in the mystery that is *conscious* mind (Chalmers, 1995, 1996).

From its beginnings in the late nineteenth century, psychical research had taken a deep interest in the relation between mind and matter, a pressing concern in the wake of biological evolutionism, advances in brain science, and the growth of materialism, for psychical phenomena seemed to suggest that mind can reach beyond the brain and outlive the body (E. W. Kelly, 2007). This concern was also central to *IM* because the issues have not gone away: materialism became yet more influential in the twentieth century with the rise of behaviorism and physicalism. Thus, the expanded empiricism of *IM* was supplemented by consideration of alternatives to materialist philosophy. The book drew attention to a theory of brain action pioneered by James, Myers, Henri Bergson, and others at the close of the nineteenth century according to which the brain acts as a filter, regulator, or transmitter of consciousness, not a producer of consciousness. The book also raised types of mind–matter metaphysics that may shed light on the wild facts, including non-Cartesian dualism and Alfred North Whitehead’s “philosophy of organism” (E. F. Kelly, 2007). This foray into metaphysics was taken further in *Beyond Physicalism (BP)*: now the basic question was *what kind of world do we live in if these phenomena are what they seem to be?* Now in

Consciousness Unbound, further nonphysicalist approaches are introduced, types of metaphysics that view consciousness as irreducible and promise to shed light on the challenging data.

In this chapter, I locate these contributions within a broader landscape of metaphysical positions that in some way or other can support “consciousness unbound” or “mind beyond brain”: *panpsychism* and *cosmopsychism*, *dualism*, *dual-aspect monism*, *neutral monism*, and *idealist monism* (including its *monadological* variety). With the upsurge of interest in the mind–body problem, approaches that received only sporadic attention for many years are now more commonly discussed. Before looking at these philosophies and their application to the wild facts, I shall say a little about materialism, physicalism, and the assumptions that impose limits on consciousness. Here I draw attention to the decisive move that gave rise to the mind–body problem in the first place, an ancient “distinction between qualities” revived in the seventeenth century in efforts to move from a largely qualitative Aristotelian natural philosophy to a quantitative science. This problematic treatment of qualities ultimately lies behind present-day physicalism and its strained attempts to reduce or even eliminate mind. It will then become clear how the mind–body problem can be approached. The cogency of alternatives to physicalism will rest in part on how well they handle the distinction between qualities, but there are many other considerations too, such as their applicability to the accredited and wild facts, and I run through some of these points of comparison before turning to the alternatives themselves. Some topics of special interest that featured in *BP* also reappear here: monistic versus pluralistic approaches, their applicability to postmortem survival, and implications for the concept of God. The last is relevant because some alternative approaches posit a consciousness that is cosmic in status or even more elevated, and the question arises as to whether this consciousness can be considered “divine” and whether it evolves through the development of the universe and its participants.

In the following, I use “consciousness” and “experience” to refer to what is also called “conscious mind,” “subjectivity,” “phenomenal feel,” and “sentience.” These and similar terms have their nuances, but they point in the same direction—to the “what’s it like to be” of contemporary philosophical parlance.²

CONSCIOUSNESS BOUND

The mind–body problem in its modern form dates from the early seventeenth century, when the deficiencies of Aristotelian natural philosophy were

becoming ever more apparent and thinkers were turning to ancient Greek atomism for inspiration. According to the new “mechanical” or “corpuscular” philosophy, the universe is composed of tiny material bodies or corpuscles that interact by collision alone. Significantly, just a few qualities were attributed to the particles and the bodies they compose: shape, size, number, arrangement, motion, and perhaps solidity and weight. These can be called “geometric-mechanical” qualities or more broadly *quantitative properties* since their magnitudes are open to numerical measurement and can support a quantitative science. All other qualities were dismissed as mere *appearance*: in themselves, corpuscles and composite bodies have no felt color, smell, taste, sound, and tactile qualities. These can be called *qualitative properties* to distinguish them from the quantitative ones:

<i>quantitative properties</i>	shape, size, number, arrangement, motion
<i>qualitative properties</i>	color, taste, smell, sound, touch (including hot/cold) ³

In effect, corpuscularists excluded qualitative properties from the world at large, confining them to observers, to conscious minds.⁴ Galileo Galilei, in *The Assayer* (1623), wrote, “Many sensations which are supposed to be qualities residing in external objects have no real existence save in us, and outside ourselves are mere names” (Drake, 1957, p. 277), perhaps echoing the ancient Greek atomist Democritus, who had claimed that color, taste, and hot/cold do not exist “in reality” (*eteē*) but only “by convention” (*nomos*). Galileo explained that minute particles in motion, impinging on the body, give rise to taste, odor, sound sensations, and heat sensations as well: “if ears, tongues, and noses were removed, shapes and numbers and motions would remain, but not odors or tastes or sounds” (pp. 276–277). Unfortunately, the exclusion of qualitative properties and the more advanced felt characteristics of mind—what it is like, for example, to know, understand, feel, imagine, desire, hope, and will—sets up a causal and explanatory gap between conscious mind and the world. John Locke (1695), himself a corpuscularist, was astute enough to recognize the difficulties:

We are so far from knowing what figure, size, or motion of parts produce a yellow Colour, a sweet Taste, or a sharp Sound, that we can by no means conceive how any *size, figure, or motion* of any Particles, can possibly produce in us the *Idea* of any *Colour, Taste, or Sound* whatsoever, there is no conceivable *connexion* betwixt the one and the other. (p. 312)

God’s “Will and good Pleasure” are invoked by Locke to ease his puzzlement, and he declares that we must be resigned to our ignorance in these and other matters (pp. 320–321)—a case of “old” mysterianism, perhaps? The

production problem is still with us today as the hard problem: How can a brain composed of matter with only quantitative properties produce experiences with qualitative as well as quantitative properties, with, say, color as well as extension? One response at the time, René Descartes's dualistic remedy, was to suppose that the brain does not produce conscious mind. Rather, they are two distinct things that interact. But then the problem becomes one of interaction between two very dissimilar things.

Corpuscular philosophy was attractive to Galileo and others because the qualities attributed to matter—shape, size, position, and state of motion—are easily quantifiable and can support a mathematical physics. The rest is history, as they say—the triumph of Newton's mathematical treatment of motion and gravitation and all that followed, although the quantitative or “physical” properties had to be significantly revised and clarified in order for physical science to advance, requiring the introduction of mass, energy, momentum, and force quantities, all based on measurement. Modern materialism or *physicalism* draws on these scientific developments to revise concepts of matter, space, and time, replacing the solid particles and empty void of former times with the array of physical constructs available to modern science, including subatomic particles, forces, fields, mass, energy, spacetime, and quantum wave functions. Quantitative properties have therefore multiplied.

Physicalism claims that all things are physical. I am tempted to write *entirely* physical, but some physicalists leave a little room for nonphysical properties. At any rate, physicalists claim that *all things are fundamentally physical*. It is not too clear what this entails, for in the philosophical context it is difficult to pin down “physical” to everyone's satisfaction. Modern physical entities and properties, mathematical in form, are often remote from experience and have very uncertain ontological status. Quantum fields, spacetime, and such may be useful ways of organizing and predicting observational data, but are they real entities or mathematical abstractions? Gone are the uncomplicated days of atoms and corpuscles as unequivocally real things with properties of shape, size, position, motion, and solidity. Definition of the physical by reference to physics is therefore not at all straightforward, even more so because physical theories are incomplete and could yet change significantly if history is a guide, perhaps to the extent of giving consciousness a central role, as one well-known interpretive approach to quantum physics already does (see below). A future physics may *not* support physicalism if physicalism, like old-school materialism, by definition excludes consciousness as an experiential reality in its own right from the constitution and causal structure of things.

The hardest of the physicalisms is a kind of *eliminativism* that wishes away the mind-body problem by dismissing the awkward qualitative properties as

nonexistent. No qualitative properties, no mind–body problem. More often, physicalism is not so hard. *Mind–brain identity physicalisms*, which are reductive rather than eliminative, identify mental states with physical brain states in one way or other—“identify and conquer” could be the motto. Defined more broadly, physicalism includes softer positions that continue to view the mental as nonfundamental but veer toward dualism and perhaps are dualism because they acknowledge qualitative properties in their own right, giving consciousness some reality of its own and making it not entirely reducible to the physical brain. In these nonreductive physicalisms, such as *epiphenomenalism* (“conscious automatism”) and *property dualism*, consciousness has secondary status, being a passive by-product or dependent property of material brain states. But for mind–brain identity theories or any of the softer alternatives, consciousness is *bound*, tied to the brain through identity, production, or dependence.

Physicalism maintains that the world is causally closed, that physical events have only physical causes. It therefore promises to *explain* consciousness in terms of physical causes alone. However, the ambition looks misplaced. While neuroscience has much of interest to say about sensory processing in the brain, it is baffled by felt qualities, unable to explain, for example, how a particular brain state is associated with, say, felt green rather than felt red. Felt colors, sounds, tastes do not come out of the equations used to model physical processes and so resist satisfactory integration into the program of quantitative science.

Materialist and physicalist philosophies have been articulated and debated by relatively few individuals over the centuries; yet their impact has been far reaching, shaping the attitudes of scientists and, through the prestige of science and technology, a far wider population by contributing to assumptions about what is possible and impossible. C. D. Broad (1949) called these Basic Limiting Principles: they are tacit convictions by now so seemingly self-evident or overwhelmingly supported by evidence that they usually go unquestioned (p. 291).⁵ They are to be distinguished from explicit, formal principles or laws in the sciences, although the limiting principles provide a background to most scientific and much popular understanding. They are culture dependent and period dependent: what is considered possible in one culture/subculture and historical period may be deemed impossible in another. For contemporary, industrial civilizations, Broad placed the Basic Limiting Principles under four headings (pp. 293–296):

1. General principles of causation
2. Limitations on the action of mind on matter
3. Dependence of mind on brain
4. Limitations on ways of acquiring knowledge

These categories reflect Broad's concern with paranormal phenomena, as do the specific examples of Basic Limiting Principles he gave: no knowledge of the experiences of others, except through various forms of language and artifacts; no knowledge of the future, except through inferences from past experience; no direct influence of will on the movement of objects, except parts of one's body; no continuation of personal consciousness after death of the body; and no communication with the living from a postmortem consciousness (Broad, 1962, pp. 3–4). These principles are negative or restrictive, setting limits on mind, on its knowledge and volition, and tying it exclusively to the brain.

The Basic Limiting Principles are in fact *more* restrictive than physicalism itself since physicalists might accept the reality of psi phenomena and try to account for them by drawing on conventional or modified science. There have, in fact, been many physical theories of psi (May & Marwaha, 2015, Vol. 2; Rao, 1978). For example, electromagnetic signal-transmission theories of telepathy, modeled on wireless telegraphy (see Noakes, 2016), were once fashionable, and modern approaches tend to draw on quantum physics, spacetime, and other multidimensional spaces. Whether purely physical theories are supportable in the face of the evidence remains to be seen, although there are serious difficulties (e.g., Beloff, 1980; Kelly, 2015b), and quantum and relativistic physics cannot be used with confidence as a basis for purely physical explanation because the physics itself may turn out to depend on irreducible consciousness in a fundamental way, as noted earlier. This is most obviously a possibility for quantum physics, where the von Neumann–Wigner interpretation gives consciousness a role (Chalmers & McQueen, forthcoming; Stapp, 1993). The same may be true of relativistic physics and its spacetime concept if relativistic frame dependence—the profound dependence of distance and time measurements on the state of motion of the measurer—ultimately derives from the organization of consciousness from multiple points of view (see below, and Marshall, 2019).

While physicalists could in principle take psi phenomena seriously, they are much less likely to accept the possibility of postmortem survival because it is difficult to envisage a purely material basis of memory and personality that could survive disintegration of the brain and communicate with the living or support an afterlife existence of some kind (see Tucker, Chapter 2 in this volume). They would most likely also dispute the genuineness of extreme wild facts, such as highly orchestrated synchronistic events and mystical perceptions of the universe, each of which can suggest that mind is far more integral to the world than physicalism admits (e.g., Mansfield, 1995; Marshall, 2005).

POSING QUESTIONS, SIZING UP THEORIES

I raised the quantitative–qualitative property distinction because it seems to me that progress on the mind–body problem hinges on its thorough reappraisal, particularly its exclusion of qualitative properties from the “body” side of the problem, from the brain and the world at large. A quantitative science of matter in motion could have been pursued *without* the exclusion of these properties. Motions can be quantified and given mathematical treatment whether or not bodies have qualitative properties, so it was not imperative to exclude them. The exclusion was a philosophical supposition without strong supporting argument. True, distinctions are usefully made between the properties, and there is something special about the quantitative ones given the consistency of their measurement across observations,⁶ but the wholesale exclusion of qualitative properties from the world by corpuscularists went too far. It was, in part, a reaction against Aristotelian natural philosophy, which had made qualitative properties intrinsic to things. An Aristotelian tree in leaf really is green, and we see its greenness when the transparency of the intervening air is actualized by light, allowing the color of the foliage to become visible. The corpuscularist’s tree, by contrast, is green only in the sense that some of its corpuscular configurations and motions contribute to a chain of events that give rise to a green sensation, to an “idea of green” in the beholder.

This is not to urge a return to Aristotelian natural philosophy despite its praiseworthy attention to the qualitative and its appealing emphasis on organicism, holism, and teleology. The success of science built on quantitative properties has to be acknowledged. But a troubled legacy has to be recognized too, a lopsided picture of the world plagued by the mind–body problem, and intrinsic value and meaning banished from nature. There is then good reason to look for alternatives to materialism and physicalism. Several kinds of metaphysics, including those advanced in Part II and in *IM* and *BP*, do make consciousness irreducible in some way and so have potential to free it from ontological, causal, and explanatory subordination to a brain conceived as fundamentally physical. These alternatives promise to ease the hard problem of consciousness and may even provide a hospitable environment for parapsychological, synchronistic, and mystical phenomena.

Many questions can be asked of them. The following list is far from exhaustive, but it does highlight some major areas in which they can be compared and contrasted, and their strengths and weaknesses evaluated. The first five questions can be asked of any mind–body metaphysics, whether or not it takes consciousness to be irreducible:

1. How are qualitative and quantitative properties treated? (*quantitative–qualitative property distinction*)
2. How is matter understood? (*theory of matter*)
3. How are space and time understood? (*theory of space and time*)
4. How is ordinary sense perception explained, and what role is given to the brain in the perceptual process? (*theory of sense perception*)
5. Is conscious mind given a causal role in nature, and, if so, in what way? (*causal efficacy of conscious mind*)

As I have stressed, theorists would do well to look closely at the quantitative–qualitative property distinction, for the wholesale exclusion of qualitative properties from nature and their confinement to the experiences of observers gave rise to the mind–body problem in the first place (question 1). Without insight into how the problem came about through the exclusion of qualitative properties, attempted solutions are liable to go astray by failing to scrutinize concepts of “material” and “physical” that rest on the exclusion. This is most obviously the case in dualist philosophies that carry over materialist assumptions about the nature of the world, but it is also evident in monist philosophies that treat the “mental” and “physical” in an insufficiently critical way. Our Part II contributors have not paid much attention to the quantitative–qualitative property distinction in their chapters, although Bernardo Kastrup does contrast *material/measurable quantities* with *experiential/felt qualities* and subdivides the latter sharply into mental and perceptual (see the section “Idealist Monism” below).

Closely related to the above is the requirement that theorists scrutinize the concept of matter and what it means to be “physical” (question 2), as well as concepts of space and time, for these also require reinterpretation if the world is taken to be experiential in a fundamental way, as some types of metaphysics do (question 3). For example, if the world is taken to be experiential in a thoroughgoing way, then space as well as matter will be experiential too, perhaps reducible to the extensional properties of experiential contents or to relations between subjects. While theorists may not go this far, they may ask what kind of experience is associated with space and allied physical entities, such as the spacetime of general relativity and the vacuum state of quantum field theory, and whether it makes sense to attribute subjectivity to these entities (see below for examples). Similarly, time may be reinterpreted in terms of experiences or relations, perhaps reduced to the transformational characteristics of experience and its contents, not only of familiar experience but also of experience of cosmic extent, a “cosmic consciousness” reported by some mystics and entertained by some philosophers (see below). Our Part II

contributors do not investigate the nature of space, time, and spacetime in their chapters, although Federico Faggin in Chapter 8 makes it clear that matter, energy, space, and time (MEST) are derivative of the ultimate mental reals he posits. By contrast, space was central to Bernard Carr's (2015) hyperspatial model of mind and matter in *BP*, and spacetime and allied concepts that treat "future" events as determinate, as existent as "present" and "past" ones, have proved helpful in the explication of precognition, although this conceptual resource has been underutilized in Part II. While the concept of spacetime is not sufficient in itself to account for precognition, it does at least introduce the idea that all events exist together in a continuum (at least according to one interpretation of spacetime). It is then necessary to explain how events distant in spacetime can be cognized. Recourse to purely physical mechanisms, such as physical retrocausality, has its difficulties, as Bob Rosenberg points out in Chapter 3. Metaphysical approaches can be brought to bear on the question, and one starting point is to suppose that spacetime is experiential in some way, perhaps the experience of cosmic mind, and therefore potentially accessible to human minds. It is only a starting point, of course, because it remains to be explained how and why certain *specific* events among the spatiotemporal universe of events cognized by the cosmic mind come to be the object of human precognitions.

A satisfactory mind-matter philosophy will also venture into epistemology and consider the role of the brain and sense organs in the perceptual process (question 4), setting out a well-elaborated theory of perception, whether "direct," "indirect," or otherwise. Direct theories maintain that the objects themselves are perceived, although not necessarily exactly as they are, whereas indirect or "representative" theories hold that perception takes place through intermediaries, through representations, which may not at all resemble the things represented. If a filter theory of brain action is adopted (as described in detail in *IM* and *BP*) and applied to ordinary and/or extraordinary perceptions, it will require integration with the preferred metaphysics (dualist, dual-aspect, idealist, or otherwise) and its status as a direct or indirect theory of perception made clear. Ideally, psychobiological details will also be fleshed out so that reference to "filtering" or "transmission" becomes more than metaphor (Grosso, 2015; Kelly & Presti, 2015). Among the contributors to Part II, Max Velmans (Chapter 5) is the most explicit about the type of theory of perception he is presenting, an indirect theory that utilizes the idea of psychological projection. Bernardo Kastrup (Chapter 7) and Federico Faggin (Chapter 8) appear to have indirect theories too, although very different from Velmans's more conventional one. Kastrup understands perceptions to be mediated by a "screen of perception" on which the transpersonal thought processes of "universal phenomenal conscious-

ness” are translated into perceptions. Faggin’s theory of communication through *symbolic* information also suggests indirect perception.

A well-developed mind–body philosophy will have something to say about the causal efficacy of consciousness in nature and the possibility of free will, especially if the physicalist assertion that “physical effects have only physical causes” is abandoned and irreducible mental causation is admitted (question 5). A reconsideration of the causal efficacy of conscious mind in the world at large may have implications for understanding psychokinetic functioning, and free will has an important place in discussions of precognition, as Bob Rosenberg brings out in Chapter 3, where he makes the point that free will and precognition are not mutually exclusive. A theory that approaches precognition by taking future states to be existent or “determinate” is not committed to a rigid determinism that rules out free will, as is commonly assumed (see also Kelly, 2015b, pp. 526–530). Among the contributors to Part II, the defense of free will is a motivating force in Faggin’s philosophy, as it was in Henry Stapp’s (2015) quantum approach. Both reject a determinate future because they suppose—unjustifiably in my opinion and in Rosenberg’s—that it is incompatible with free will.

When a philosophy takes consciousness to be fundamental in some way, additional questions arise, including the following:

6. How widely distributed is subjectivity in nature? (*distribution of mind*)
7. One inclusive mind or many distinct minds? (*numerical monism versus pluralism*)
8. Is consciousness associated with the cosmos fundamental, or is there a yet deeper level of consciousness? (*ontological ultimacy*)
9. If consciousness is essentially unbound, what makes it limited or appear limited? How did limited subjectivities originate in the first place? (*principle of limitation*)
10. Does consciousness develop and evolve? If so, how and to what end (if any)? (*developmental and evolutionary issues, including teleology*)
11. What implications, if any, are there for the concept of God? (*theological implications*)

Question 6 refers to the panpsychist view that consciousness is not restricted to human and nonhuman animals but is widely distributed throughout the world, perhaps even to the extent that basic particles described by physics are conscious to some minimal degree (see the next section). Question 7 concerns the oneness or plurality of consciousness: some theories have just one all-inclusive consciousness or mental aspect, while others envisage a plurality of distinct units of consciousness, either partial or all-inclusive and perhaps

derivative of an ultimate source consciousness. This distinction between monistic and pluralistic approaches receives special attention below given its relevance to the theories set out in Part II, *IM*, and *BP*, and its bearing on the possibility of postmortem survival of a personal kind. A related question concerns the ultimacy of consciousness at the cosmic level (question 8). If it is supposed that consciousness does have a cosmic dimension, as an aspect of the universe or as its basic nature, then the question arises as to whether this consciousness is fundamental or derivative of something ontologically prior to it, a “hyperc cosmic” reality of some kind, perhaps a supreme consciousness, such as the source reality that pluralistic systems tend to posit in order to ground and link their multiple units of consciousness.

If consciousness does have cosmic and even hypercosmic dimensions, the relation between these dimensions and the familiar sense-based consciousness becomes a matter of interest (question 9). In particular, how does boundless consciousness limit or conceal itself in order to support bounded consciousness? The question has been addressed by several mystical philosophies and has attracted attention in recent philosophical discussion of “cosmopsychism” (see below), although without the richness of detail and practical concern to be found in religious contexts, where liberation from limited self-identifications and “the desire and pursuit of the whole” drive the agenda rather than academic philosophical concerns. The converse to limitation or concealment of expansive consciousness is the development and evolution of consciousness from its limited condition. This is not just psychological and evolutionary development as studied in mainstream science; it also includes evolution of consciousness on the grand scale, including the possibility that such evolution is purposeful and end directed (question 10). Several contributors to Part II do raise the idea that the development of limited consciousness contributes to the evolution and self-knowledge of a greater whole.

Another question that follows from positing cosmic and hypercosmic dimensions of consciousness takes the inquiry into theological territory (question 11). Has God entered the picture as one or both of these transpersonal types of consciousnesses, and, if so, what kind of God—an evolving pantheistic God identified with the universe, an evolving pantheistic God that includes and yet exceeds the universe, or the immutable God of classical theism, involved in the creation but more distinct from it than the God of panentheism? Although contributors to Part II have not for the most part looked into the theological implications, the concept of God, especially the pantheistic variety, had a significant presence in *BP* and deserves a return visit here, particularly so because this volume features Roderick Main’s endeavor to situate Jung’s understanding of mystical experience within an implicit pantheistic metaphysics.

Questions can also be raised about the plausibility of theories in the light of evaluative criteria commonly described in the sciences:

12. How well does the theory shape up to evaluative criteria employed in the sciences? (*theoretical virtues*)

Criteria for “good” theories have been the subject of much discussion in the philosophy of science, for it is sometimes necessary to adjudicate between competing scientific theories that make the same observational predictions (“empirical equivalence”) and cannot be differentiated by the currently available evidence (“underdetermination”). In these cases, the criteria of *predictive accuracy* (makes successful predictions) and *empirical adequacy* (competent at fitting the observations) are not sufficient to decide between theories, and so additional criteria are raised.

Metaphysical theories differ from scientific ones in significant ways, and so it should not be assumed that the evaluative criteria applied to scientific theories are directly transferable to the metaphysical context. Nevertheless, there is sufficient overlap between metaphysics and scientific theory to suggest that some transfer, with appropriate adjustments, is legitimate. Metaphysical theories unabashedly address reality and aim to provide a *true* account of it. The situation is not so clear-cut with scientific theories. On the one hand, scientific *realists* do suppose that scientific theorization aims to describe the world as it truly is and that at least some postulated entities, such as atoms and perhaps fields and spacetime, do exist, even if we know them only through the mathematical descriptions that quantitative science gives us. In contrast, scientific *antirealists* suppose that theories are ways of summarizing observational data and making predictions, and they have nothing to say about reality. Clearly, scientific realism, unlike antirealism, shares with metaphysics an orientation toward reality and truth, if not so fundamentally, and the evaluative criteria that realists adopt to supplement empirical adequacy and predictive accuracy may have some applicability to metaphysical theories. This is not to say that empirical adequacy and testability are irrelevant in the metaphysical context. The former is relevant up to a point, for the representation of phenomena by a theory, even a nonmathematical, metaphysical one, should agree with the experiential facts. Metaphysics may even inform models with testable predictions if those models are open to mathematical treatment. Some theorists, myself included, do entertain the idea that physics at its most fundamental may be derivable from metaphysics (see the section “Monism versus Pluralism” below). If this sounds too ambitious, a metaphysical theory might at least provide a framework in which

physical, biological (including evolutionary), and psychological phenomena become more comprehensible, and so the following can be asked:

13. What light, if any, is shed on scientific theories and observations? (*insight into accredited facts*)

Given the foundational status and prestige of physics, it will be particularly significant if a metaphysics is able to shed light on the well-known interpretational challenges presented by quantum physics and the less acknowledged ones of relativistic physics.

Metaphysicians, like scientific realists, will be interested in the deeper truth of theories, truth that is more than the accurate modeling of observables, and will therefore value the *explanatory insight* that theories offer, the light they shed on causes, processes, entities, structures, and even the inherent nature of things. Other criteria of interest might include *internal consistency* (not self-contradictory), *external coherence* (fits with well-established knowledge), *aesthetic appeal* or *elegance* (pleasing to the beholder), *simplicity*, *parsimony*, or *economy* (keeps complexity, assumptions, and explanatory entities to a minimum), *explanatory range* or *subsumptive power* (unifies a variety of sometimes disparate phenomena), *fruitfulness* (opens up new lines of inquiry), and *practical applicability* (real-world usefulness). Some criteria will be judged more important than others, such as explanatory insight and internal consistency, while some are hard to pin down and are quite subjective, notably aesthetic appeal and simplicity. Newton's treatment of gravity is mathematically simple compared with Einstein's general theory of relativity, but the latter rates more highly in predictive accuracy, empirical adequacy, and explanatory insight. Parsimony, while an admirable quality, can be a vice rather than a virtue if it results in a theory too meager to explain the phenomena. A particularly germane case is corpuscular philosophy: its parsimony, a reaction against Aristotelian profusion of qualities, led straight to the mind-body problem by excluding qualitative properties from nature. Nor is parsimony on its own a decisive factor if several theories can make the same claim: monists of various persuasions—idealist, dual-aspect, neutral, and materialist—take pride in the elegance and parsimony of their theories since they posit just one substance rather than the two of dualism.

A theory can be evaluated across a variety of phenomena, including familiar sense experiences (question 4) and scientific observations (question 13), but the phenomena of particular concern in this volume are the rogue phenomena, the wild facts:

14. How satisfactorily are parapsychological, synchronistic, and mystical phenomena accommodated? (*insight into wild facts*)

Does the theory offer explanatory insights into processes behind, say, psi and postmortem survival? Are new lines of inquiry opened up by the theory, and what real-world usefulness might it have? Can it, for example, inspire us to lead better lives and build better societies and formulate our long-term aspirations? What is the theory's explanatory range? It is noteworthy that theories sometimes address just one or two of the wild facts, say, telepathy and clairvoyance, but not more theoretically challenging phenomena, such as precognition, psychokinesis, survival, and mystical experience. The narrow range could be due to either basic limitations of the theory or a lack of conviction on the part of the theorist over the genuineness of the more challenging phenomena. The importance of including mystical experience in the range of phenomena to be explained cannot be overstated, for there are clear connections between psi and mystical phenomena, and so an adequate theory should address both (Marshall, 2011). Mystical experience is particularly interesting from a metaphysical point of view because it has claims to be revelatory of reality, seemingly bringing the mystic into immediate contact with it (Marshall, 2014, 2015a).

Striking coincidences, when hard to brush aside as mere chance, are phenomena that a theory would also do well to include in its explanatory range, for they too raise questions about the nature of reality. If coincidental events are "psi mediated"—staged by unconscious telepathic, clairvoyant, precognitive, and/or psychokinetic functioning—then a theory that satisfactorily addresses psi may also be able to explain striking coincidences. Some simple coincidences, such as a surprise phone call immediately after one thinks of the caller, are readily attributable to telepathy, but others are so involved that they suggest a degree of orchestration in the world beyond the capability of the unconscious psi functioning of individual minds, therefore pointing to coordinating activity or organizing patterns at a deeper level of reality. All the theories presented in Part II describe some such deeper level, whether a greater consciousness or a psychophysically neutral ground, such as Jung and Pauli's *unus mundus* ("one world"). The challenge then is to work out what role that deeper level of reality might play in the manifestation of coincidences.

One approach, of course, is through the Jungian concept of synchronicity, a so-called acausal connecting principle rooted in the archetypal contents of the *unus mundus* and responsible for meaningful coincidences. In this volume, Roderick Main (Chapter 4) explains that Jung took this connecting principle,

grounded in wholeness or unity, to be explanatorily fundamental not only for meaningful coincidences but also for extraordinary experiences more generally, including mystical states. Bob Rosenberg (Chapter 3), however, is not convinced that synchronicity as *meaningful* connection is sufficient to account for precognitive episodes because many seem to be trivial, exhibiting no obvious meaning. Synchronistic phenomena, however, are one reason why Jeffrey Kripal (Chapter 10) finds attractive the dual-aspect monism developed by Harald Atmanspacher from Jung and Pauli's speculations on the *unus mundus* (see below).

Our theorists in Part II were not asked to address the above questions other than to set out the basics of the philosophies they favor or take an interest in and to consider how to apply them to some of the rogue phenomena. They were not, for example, asked to explain specifically how they tackle the classic distinction between quantitative and qualitative properties or the status of free will or to bring out the relevance of their approaches to interpretive problems in modern physics. Accordingly, in the following overview of candidate philosophies, I shall not work through the above questions systematically, but they will inform the discussion. I begin with those positions known as panpsychism and cosmopsychism because neither stands on its own as a full-fledged mind-matter philosophy. They are theories about the distribution and irreducibility of mind but do not in themselves commit to a specific understanding of the relation between mind and matter. They are incomplete unless combined with other metaphysical theories that do, such as dualism, dual-aspect monism, neutral monism, and idealism.

PANPSYCHISM AND COSMOPSYCHISM

Panpsychism has had a long, distinguished history, and in recent years it has attracted renewed interest (Seager, 2020; Skribna, 2017). It is the view that many things throughout nature are irreducibly conscious, being endowed with conscious mind, subjectivity, or at least a modicum of experience ("panexperientialism"). Crudely put, it is the view that *all things are conscious* or that *everything has a mind*. But the panpsychist's "all things" and "everything" are not to be taken literally: a loose collection, such as a pile of stones or a flock of sheep, would most likely not be attributed its own individual subjectivity, but biological organisms from the microscopic to the very large most likely would, as would perhaps subatomic particles, atoms, and molecules, and even the universe as a whole. Many present-day philosophers sympathetic toward panpsychism would be reluctant to attribute subjectivity to rocks, rivers, lakes, mountains, planetary bodies, and the like, understood as aggregates rather than

true unities or organisms. Basic constituents of these objects, such as atoms, may have their individual subjectivities but not the aggregate itself. However, animistic panpsychisms and contemporary ecological ones would be more willing to attribute consciousness, souls, and even personhood to rocks, rivers, and other features of the natural world (see, e.g., Swancutt, 2019).

The idea that the universe as a whole is conscious—is an experiencing subject—has come to the fore in recent years as an offshoot of panpsychism under the name *cosmopsychism* (Gaudry, 2008; Goff, 2017), although it has ancient roots, as Federico Faggin’s intriguing Chapter 8 epigraph suggests, referring as it does to the Stoic idea that the universe is alive and possessed of reason.⁷ Only by virtue of the cosmic intelligence can derivative parts of the universe be living and intelligent. The Stoics associated the universe with a divine, rational principle, but modern cosmopsychists are not obliged to follow suit. Indeed, the consciousness they attribute to the universe can be quite rudimentary. For example, Goff (2017) thinks that the consciousness of the universe is more likely to be “simply a mess” than “a supremely intelligent rational agent” (p. 243).

Cosmopsychism can be a feature of several mind–matter philosophies, notably dual-aspect and idealist monisms—hence the title of Max Velmans’s chapter on dual-aspect monism: “Is the Universe Conscious?” Panpsychists can direct this kind of question at all manner of things, from atoms and molecules, and crystals and cells, to cats and trees, and even to planets, solar systems, and galaxies, but directed at the universe as a whole it sounds particularly odd since it invites us to consider the universe as a *subject*, even though there is nothing external to the universe for it to be conscious of (unlike, say, a cat, which is conscious not only of its internal states but also of its external environment). Clearly, the universe as a totality is significantly different from other entities to which consciousness might be attributed. Presumably, the universe takes itself or parts of itself as its object, if only dimly, which means that it would be both subject and object. By making the universe an experiencing *subject*, cosmopsychism goes further than the claim that the entire universe is an *object* of consciousness. The latter claim is illustrated by Berkeley’s idealist metaphysics (see below), for which the universe exists as ideas in the mind of God. Here the universe is object, and the subject is God. Thus, cosmopsychism, defined as the view that the universe has subjectivity, is not the only way to associate the universe with consciousness. It follows that mystical experiences of “cosmic consciousness” are not evidence exclusively for cosmopsychism, for they could equally point to the universe as the object or content of consciousness.⁸

Defined narrowly, panpsychism is the view that “the basic physical constituents of the universe have mental properties, whether or not they are parts

of living organisms” (Nagel, 1979, p. 181). What, then, are the “basic physical constituents”? The most obvious candidates are particles theorized by physicists, such as those of the Standard Model. The reality status of fundamental particles is problematic these days, as both Kastrup and Faggin point out in their chapters, prioritizing a field picture of matter according to which particles are excitations in quantum fields. But let’s suppose that behind all the mathematical abstractions, incomplete theory, and interpretive fog that surrounds quantum physics there really are particulate entities, discrete or at least semi-discrete, and that these entities are conscious subjects or units of experience, if only minimally so. This micro-level kind of panpsychism or panexperientialism has been called *micropsychism* or *microexperientialism*. The micropsychist often supposes that basic particles, each with their own basic subjectivity, combine to give more complex bodies with more advanced subjectivities. This bottom-up kind of panpsychism has been called *constitutive micropsychism* because it aims to build higher-level consciousness from the primitive subjectivities of tiny particles (Goff, 2017).

Constitutive micropsychism has a well-known difficulty, one that Kastrup takes to be a fatal weakness. For it does not follow that the combination of micro-units into a complex arrangement would merge their individual subjectivities into a single subjectivity associated with the arrangement or generate a completely new subjectivity in addition to all the individual ones. Such “compounding” of consciousness is problematic, as James (1890b) pointed out long ago, and now goes under the name of the “combination problem” (Seager, 1995). Alternatively, it might be supposed that the fundamental unit with mental properties is not microphysical but cosmic, the universe as a whole. In holistic fashion, the universe is understood to be more than a bottom-up sum of its parts. Rather, it gives to its parts their character, working in top-down fashion. This has been called *constitutive cosmopsychism* (Goff, 2017) and *priority cosmopsychism* (Nagasawa & Wager, 2017), and it will qualify as panpsychism as well if a case can be made for the top-down process yielding a multiplicity of subjects throughout nature. There is a challenge here analogous to the combination problem, a “limitation” or “concealment” problem: How can a global subject or global experience be anything other than global?⁹ Why numerous limited subjectivities and not just one global subject? For this, we need a principle of limitation. Wrestling with the all-inclusive, absolute experience posited by the monistic idealisms of his time, James (1909a) put it thus: “How can many consciousnesses be at the same time one consciousness?” (pp. 207–208).

This is a question not just for academic philosophers: it also features in religious cosmogonies that trace the limitation or concealment of supreme consciousness into finite manifestations and in associated soteriological

endeavors that seek to reverse the process through spiritual practice. One particularly interesting example is raised by Glenn Magee in Chapter 6, drawing on Biernacki (2015)—namely, Abhinavagupta on the three *malas*. These are impurities that conceal divine consciousness through limitations of self-identification and action. Abhinavagupta was a leading theoretician and practitioner of nondual Kashmir Shaivism, which describes in detail the steps through which supreme consciousness conceals itself through a creative power of limitation, *māyā*, yielding a multiplicity of finite, temporally bound, individual selves (*puruṣas*), limited in activity, knowledge, and satisfaction (Marshall, 2019).

Panpsychism, like cosmopsychism, is not tied to any one mind–matter metaphysics, for it is merely a claim about the *distribution* and *irreducibility* of subjectivity. In itself, panpsychism does not specify *how* those things have their subjectivity. For this, it has to be integrated with full-blown mind–body metaphysics, such as dual-aspect, neutral, and idealist monisms. In theory, there could be panpsychic substance dualism as well—say, each material unit is loosely associated with its own immaterial soul. Somewhat contentiously, even physicalism can be formulated in a way that makes it seem panpsychic. Strawson (2006) agrees with physicalists that everything is physical and accepts that experiential phenomena are physical phenomena, but he then turns the table on mind–brain identity physicalism by pointing out that if experiential phenomena are physical, then there is more to the physical than standard physicalisms acknowledge. However, if physicalism is defined rigorously as *excluding* irreducibly qualitative properties and conscious mind from the essential constitution of things—as perhaps it should be in order to preserve its distinctiveness as a metaphysical position and avoid terminological confusion—then it cannot be used to support panpsychism.

Constitutive micropsychism may be troubled by the combination problem, but it does not follow that all panpsychisms are so troubled. For example, in Chapter 5, Velmans maintains that his dual-aspect monism avoids the combination problem because it does not take macro-subjectivities (such as our human subjectivities) to be “simple compounds” of the micro-subjectivities of particles. Instead, the constitution of macro-subjectivities is attributed to the “integrative physical processes that support them”—that is, to the physical aspect of mind. More generally, if panpsychism declines the constitutive role asked of it, then the difficulty goes away (Chalmers, 2016). Nature is viewed as full of subjects, but they are no longer expected to combine to yield new subjects. Some subjects will have basic experiences, others more complex experiences, but the latter are not pieced together from the former. Such nonconstitutive panpsychisms may not be able to explain the experiential differences between subjects in terms of composition, but its picture

of nature as full of minds or mindlike beings would still have its attractions, serving to counter human exceptionalism by distributing consciousness widely and furnishing a metaphysical basis for environmental ethics and deep ecology (e.g., Mathews, 2003).

Thus, although constitutive micropsychism may have serious difficulties, panpsychism in general should not be rejected, and there may be ways of developing it that avoid the combination problem. Constitutive cosmopsychism, we have seen, is presented as an alternative to constitutive panpsychism that is not beset by the combination problem (although it has to address the limitation/concealment issue). Another approach, pointed out by James (1890b, Vol. 1), is to suppose that subjectivities do not combine to yield a greater subjectivity but affect an *already* existing subjectivity or “soul” to which the external multiplicity of subjects appears as a unity (p. 161). This “soul theory” is not itself transparent because the influence of the multiplicity on the soul has to be explained (pp. 180–181). One way to develop the soul theory is through Leibniz’s philosophy of monads, a type of metaphysics that is too speculative for James’s liking, although he does acknowledge that its distinguished pedigree means that it “must have some sort of destiny” (p. 180). Some contemporary theorists, myself included, do indeed suppose that this approach bypasses the combination problem, although it does have challenges of its own (see the section “Monadological Idealism” below).

As for the wild facts, panpsychism can be used to reinterpret psychokinetic “mind-over-matter” effects as telepathic “mind-over-mind” effects. This is possible because material bodies are units—or consist of micro-units—that have some level of awareness that makes them responsive to the will of an agent. Psychokinesis becomes a form of telepathic coercion or persuasion. Precisely how this would pan out depends on the details of the mind–matter metaphysics in which the panpsychism is set and how the metaphysics is employed to explain telepathy. Illustrations can be found in Whiteheadian process philosophy (Griffin, 1993, 1997; Weiss, 2015) and neo-Leibnizian monadology as applied to parapsychological phenomena (Marshall, 2015b).¹⁰

Panpsychism can also be brought to bear on mystical experiences, spontaneous or induced, that bring unitive revelations of living presences or centers of consciousness in nature, even in particulate matter. William Blake’s vision of conscious, luminous particles on the sands at Felpham comes to mind,¹¹ and there are varied examples in the modern literature (e.g., Grof, 1979; Marshall, 2019). These experiences lend themselves to panpsychist interpretation and can inspire panpsychist philosophy (see below on Fechner). For example, Timothy Sprigge, the leading metaphysical idealist of the late twentieth century, applied his panpsychist version of idealism to environmental ethics and nature mystical feeling, in both instances drawing on the idea that conscious-

ness is a requisite for “intrinsic value,” the value that something has in itself. It follows that a widespread distribution of consciousness in nature implies widespread intrinsic value (Marshall, 2005). According to Sprigge, in some nature experiences an empathetic connection or “rapport” (or perhaps even a direct connection) is established with consciousness in nature. It has been reported that Sprigge had “an intuitive experience of panpsychism” when, aged twenty, he was walking in the countryside and came to the idea that the clouds were “appearances of some form of consciousness” (O’Grady, 2007).

One recent suggestion, made by philosopher Philip Goff (2019), links panpsychism not to mystical intuitions of subjects distributed in nature but to a “formless consciousness,” presumably the “pure consciousness” of introvertive mystical experience much discussed in the mystical studies literature (Forman, 1990; Stace, 1960; see also Marshall, 2005), and the focus of Roderick Main’s Chapter 4 in the present volume. This is an unexpected path to take since panpsychism, as a theory about distribution of minds in nature, would seem to have nothing to do with a formless consciousness that is traditionally depicted as transcendent or partly transcendent to the world. But Goff brings it into the panpsychist picture by naturalizing it—that is, by depriving it of its transcendent or hypercosmic dimension. In doing so, he is responding to Albahari’s (2020) introduction of Advaita Vedantic or perennialist “nondual” consciousness into the discussion, a supreme consciousness that grounds individualized instances of consciousness. Goff feels impelled to naturalize this formless consciousness, given its worryingly supernatural character, and he does so by suggesting that it is the *intrinsic nature* of spacetime. Goff explains that intrinsic nature is what something “is in and of itself,” while extrinsic nature is what something “does,” its behavior, which physics observes and describes.¹² Ordinary consciousness, by contrast, is the intrinsic nature of spacetime that has been warped into matter, into massy objects.¹³ Mystical experience presumably takes place when the limited consciousness of a massy, panpsychic entity (such as you and I) opens in some unspecified way to the formless consciousness of spacetime.

The suggestion is dependent on an attractive but contested interpretation of spacetime as the basic “substance” out of which matter is made. One attraction of this so-called supersubstantialism is its parsimony, for it is monist rather than dualist: instead of two basic substances, spacetime and matter, there is just the one—spacetime (e.g., Lehmkuhl, 2018; Schaffer, 2009). However, the equation of formless consciousness with intrinsic spacetime consciousness is unconvincing because formless consciousness is said to be simple, undifferentiated, without attributes (*nirguna*). By contrast, a consciousness intrinsic to supersubstantial spacetime would presumably be very complex, reflecting the complex geometrical structure of spacetime

that stands in for matter and fields, with multifarious curvatures, ripples, and warps—a highly complex entity with an overall geometry and many differentiated regions. If there is a conscious dimension to the spacetime universe, it is surely indicated not by formless consciousness but by the cosmic consciousness noted earlier, a highly diversified, content-rich but nondual experience—that is, cosmic consciousness with qualities (*saguṇa*) rather than pure consciousness without qualities (*nirguṇa*).

In this volume, Main focuses on pure consciousness, responding to a challenge presented by Kelly and Grosso (2007) by finding a place for introvertive mysticism in Jung's experiences and theoretical efforts. By contrast, cosmic consciousness or extrovertive mystical experience is the type of experience addressed by Glenn Magee's neo-Hegelian concept of "hyperconscious" experience of the universe as a unified whole, while Max Velmans addresses both pure consciousness and cosmic consciousness. As for cosmopsychism and panpsychism, Velmans's dual-aspect metaphysics embraces the former and has a place for the latter, while Bernardo Kastrup accepts cosmopsychism as long as it is idealist but strongly rejects constitutive micropsychism. Federico Faggin does not refer to either cosmopsychism or panpsychism in his chapter, although his notion of One as the "interiority of all that exists" and his own experience of cosmic consciousness could suggest an openness toward some kind of cosmopsychism. His multiplicity of consciousness units and their combinations may be consistent with some kind of panpsychism but not with micropsychism, since Faggin, like Kastrup, takes quantum field theory very seriously in framing his theory of consciousness. In quantum field theory, the field is primary, and particles have no concrete reality of their own. Therefore, attribution of consciousness to them is unnecessary (Faggin, personal communication). As for Hegel's philosophy, it seems that it can be labeled cosmopsychic and panpsychic only if these terms are applied in unconventional ways—the philosophy resists simple categorization (Magee, personal communication).

SUBSTANCE DUALISM

It may seem strange to include dualism in this overview because its most famous representative, the substance dualism of Descartes, is *the* textbook case of a metaphysics beset by the mind–body problem. It has its own severe version of the quantitative–qualitative property distinction and therefore immediately fails to meet my requirement that the distinction be thoroughly reevaluated. To its credit, though, Cartesian dualism has no mind–matter *production problem*, for mind as a distinct substance is not produced by matter.

There is, however, a mind–matter *interaction problem*: How do matter and mind act on each other if they have so very little in common, the former being nonthinking extended substance and the latter non-extended thinking substance? The difficulty was acute for Descartes because material interaction for a corpuscularist boils down to collisions between bodies, an impact model not translatable to the interactions of extended matter and unextended mind.

Although unfashionable in the twentieth century, substance dualism had a few prominent supporters among philosophers and neuroscientists, including Karl Popper and John Eccles, and it is conceivable that more up-to-date versions may have some success if they can fend off the usual criticisms, such as the interaction and energy conservation problems (E. F. Kelly, 2007, pp. 607–611). The latter is the claim that mental interaction with the physical world would violate the conservation laws of physics. Within parapsychology, dualism has probably received more attention, both supportive and hostile, than any other nonphysicalist approach (e.g., Beloff, 1962; Marwaha & May, 2015). Dualism certainly does offer resources to students of parapsychology. For one thing, the mind posited by substance dualism is not dependent for its existence on the material brain, and so it is the kind of thing that could survive bodily dissolution. For another, substance dualism gives to mind those felt characteristics that physicalism tends to brush aside, not just the felt greens and reds but also the knowing, meaning, feeling, imagining, and willing of conscious mind. It therefore captures the lived reality of parapsychological phenomena in the wild. This is one of the arguments that philosopher and parapsychologist John Beloff made in favor of Cartesian substance dualism, although it could equally count for any mind–matter metaphysics that gives mental life its proper due, including non-Cartesian substance dualisms and nonphysicalist monisms.

For interactionist dualism to underpin psi phenomena, Cartesian localization of mind–body interaction to the brain has to be relaxed. Thouless and Wiesner (1947) took this step when they attempted to normalize the paranormal by hypothesizing that in clairvoyance, the mind or self—or what they would prefer to label “the soul” or even better just denote by the Hebrew letter ψ (Shin) to avoid unwanted connotations—is in the same sort of relation to the external world as it is to the sensory regions of the brain in normal thinking and perception (p. 180). Similarly, in psychokinesis, Shin controls the external world in the same way that it controls the motor activity of the nervous system (p. 181). Put more simply, Shin interacts with the world both in the brain and outside the brain, and in both cases the interaction takes place in a comparable manner. Normal and paranormal interaction with the world are essentially the same, the difference being that the former takes place in the brain and the latter in the wider world. As for telepathy, it can

be understood as an interaction between one person's Shin with the brain of another, rather than Shin-to-Shin or brain-to-brain interaction. The Cartesian soul, unshackled from the restriction that it interact only with its own brain, acquires a range of psi abilities.

Details of how the interactions take place are clearly needed, and one way to flesh them out is to bring in quantum physics, which has its own built-in dualism between the observer and the quantum system under observation. In some interpretations of the physics, the observer's act of measurement is said to collapse the system's probabilistic wave function into a definite outcome. But where lies the divide between observer and observed, the so-called Heisenberg Cut? If the observer's measuring apparatus, body, sense organs, and brain are treated as parts of the quantum system, as their atomic and molecular constitutions suggest they should, then what remains of the observer responsible for collapsing the wave function? One answer, startling from a classical perspective, lies in the interpretive tradition of John von Neumann, Fritz London and Edmond Bauer, and Eugene Wigner: it is the consciousness or "ego" of the observer. The Heisenberg Cut between macroscopic measurement system and microscopic quantum system becomes a Cartesian Cut between consciousness and the entire physical world. Dualism promises to shed light on quantum physics, and quantum physics to flesh out dualist interaction.

Quantum physicist Henry Stapp developed this interpretive approach into an interactionist dualism that asserts free will in the face of classical determinism. More recently, he has acknowledged its applicability, with some adjustment, to parapsychological phenomena. For example, reincarnation can be understood as the detachment of consciousness from a decaying brain and its reattachment to a new, developing brain, which is possible due to the fundamental separateness of conscious observer and quantum system in the standard von Neumann–Wigner approach (Stapp, 2015). The only deviation from the standard approach is a relaxation of the stipulation that consciousness interact solely with its own brain—comparable to the widening of interaction in the Thouless–Wiesner theory. The relaxation also allows for the accommodation of psychokinetic effects, with consciousness interacting directly with the world beyond the brain—in the rest of the body and the world at large. As for precognition, Stapp deviates from the standard approach by allowing nature to have a *nonrandom* response in its interactions with consciousness, selecting and actualizing the event that has been precognized (pp. 184–190). Thus, the observer's precognition steers nature to engineer the occurrence of the precognized event, which differs from the more usual understanding of precognition as a glimpse into the actual or possible future.

If nature's responses are not always random and may be nonrandom generally, then new light is shed on Stapp's ontology. Stapp distinguishes between

the conscious observer and the physical universe or, more accurately, the universe *described* by the evolving quantum state. Does this mean, then, that Stapp is a substance dualist in the manner of Descartes, making a firm distinction between conscious mind and a purely physical world? It seems not, for Stapp (2017) now refers to the “fundamentally mental character of reality” (pp. 71–74). He explains that the quantum state, in its provision of potential outcomes to consciousness, is more mindlike than matterlike in its behavior. This leads him to speculate that “all of reality is made of one single kind of stuff”—mind is fundamental (p. 73). Stapp’s dualism turns into a metaphysical idealism: all is mind, including the “physical world” described by the evolving quantum state.

But is it possible to remain a substance dualist and tackle the interaction problem left by the Cartesian version, with its mind and matter so radically distinguished? Substance dualisms might fare better if they made mind and matter more alike by reevaluating the distinction between qualitative and quantitative properties. Cambridge Platonist Henry More (1614–1687) set a precedent by rejecting the Cartesian extended–non-extended distinction when he posited spiritual extension: like matter, spirits are extended, but unlike matter, they are able to dilate and contract themselves and are self-movable, self-penetrable, and indivisible (Leech, 2019). Contemporary dualisms can also narrow the gap between mind and matter by giving them more qualities in common (Baker & Goetz, 2011). For example, John Smythies attributes extension to mind as well as matter in his version of non-Cartesian dualism. Making the important observation that some experiential contents have extensional character, such as visual images and body sensations, he locates them in a phenomenal space distinct from physical space. In his later thought, Smythies (2012) takes up recent cosmological ideas and thinks of these spaces as different “branes” in the cosmic “bulk” and has “trans-dimensional causal relations” between the two: afferent “psi-gamma” and efferent “psi-kappa” relations. While experience and the physical world are brought closer together through shared qualities of extension, the dualism of two *separate* spaces, one phenomenal and one physical, still seems to rule out mind–body interaction. Smythies, however, is not concerned because he reduces causation to Humean constant conjunction. There is correlation but seemingly no need for causal explanation of the correlation, an attitude that could equally be adopted by Cartesian dualism or any approach that makes interaction mysterious. Smythies understands parapsychological phenomena as extensions of the psi-gamma and psi-kappa relations beyond their normal range, comparable to the Thouless and Wiesner approach but now working across phenomenal and physical spaces (see also Carr, 2015).

Steve Taylor's (2018, 2020) "panspiritism" is another contemporary approach that does not restrict extension to the physical and is willing to tackle the rogue phenomena. Taylor does not himself regard his panspiritism as dualism, positioning it instead closer to dual-aspect monism (although without the latter's inherent panpsychism) and in a middle ground between dualism and monism, understanding their relation as one of "difference and nondifference" (suggested by Bhedābheda Vedānta philosophy). Still, there is a dualist feel to his treatment of mind and matter, the two being viewed as ontologically distinct and interacting. In the manner of a dualist version of filter theory described by James (1898),¹⁴ panspiritism rejects the production model of consciousness and supposes instead that the material brain "receives" universal consciousness or spirit and "canalizes" it into the individualized forms of personal consciousness. The canalization of spirit is more than a hydraulic metaphor because Taylor's spirit has an extended, fluidlike character, pervading all matter and space, like water in a sponge, reminiscent of Stoic *pneuma*, an idea suggested to him by widespread notions of spirit-force in the anthropological, religious, and philosophical literatures, and also by mystical experiences, including his own (Taylor, 2018, pp. 128, 142–144). Matter is generated and pervaded by universal consciousness, but it has its own ontological status distinct from universal consciousness and the individual minds that material brains support. This gives Taylor's system its dualist feel, even though matter is produced by consciousness. In this one respect, panspiritism is comparable to theistic dualisms in which a fundamental consciousness, a divine mind, creates matter and souls as distinct things, although Taylor is clear that while he understands universal consciousness to have a dynamic, creative quality, it is impersonal and lacks subjectivity.

Dualist efforts to close the gap between mind and matter by making the two more alike may ease the interaction problem up to a point, especially if matter and space are also made more mindlike by taking on qualitative properties, but if the strategy is carried out to its logical conclusion (as perhaps it must be), the dualism collapses into monism, and the question arises as to whether dualism is needed in the first place. Moreover, while dualism has had some popularity among parapsychologists, it is not helpful in explaining mystical experiences of the natural world, which are anything but dualist, bringing self and world together in a profound unity. The mystic feels fully a part of the world, identifies with it, or even contains it in a greater self or mind (Marshall, 2005). It is true, as Main notes in Chapter 4 of this volume, that mysticism scholar Robert Forman (1999) has identified a type of mystical experience with a dual structure, the "dualistic mystical state" in which pure consciousness rests alongside but is distinct from the world of multiplicity. This dual state corresponds to the fifth of seven states of consciousness de-

scribed by Transcendental Meditation, where it is made clear that the duality of the pure conscious self and the world belongs to a *transitional* stage of practice, a step toward unitive mystical states proper in which the world is recognized to be unified in the Self (Marshall, 2005, pp. 170–173). For these properly unitive states, mind–matter monisms appear to be more applicable than dualism, and to these I now turn.

DUAL-ASPECT MONISM

While dualism treats mind and matter as two distinct things, dual-aspect monism brings mind and matter together as aspects of just one kind of thing approached from different perspectives—hence, like materialism and idealism, it is a substance monism. The approach is commonly traced back to Baruch Spinoza’s monism in the seventeenth century, and double-perspective language was prominent in the nineteenth-century idealist monism of Arthur Schopenhauer, an admirer of Spinoza.¹⁵ Indeed, double-perspective language is not the sole preserve of dual-aspect monists, as the example of Schopenhauer demonstrates, and in this volume it is employed by Kastrup and Faggin in their idealist theories. For idealists, the “physical” aspect is ultimately reducible to consciousness, mind, or perception in some way, while for the dual-aspect monist the physical is not reducible to the mental.

Dual-aspect monism properly emerges later in the nineteenth century with Gustav Fechner, George Henry Lewes, and G. J. Romanes, among others. In this volume, it is represented by Max Velmans’s reflexive monism and Jeffrey Kripal’s reflections on the Human as Two. According to dual-aspect monism, mind and matter are coequal, concomitant, and mutually irreducible aspects of nature, which is therefore always and everywhere *both* mental and physical. To use Fechner’s (1860/1966) analogy, a circle is both concave and convex, the former when viewed from the inside and the latter when viewed from the outside. As Lewes (1877) put it, “The curve has at every point this contrast of convex and concave, and yet is the identical line throughout” (p. 334). Likewise, nature viewed from the inside exhibits its mental aspect, studied by introspective psychology, while nature viewed from the outside exhibits its physical aspect, studied by physics. The perspective taken, inner or outer, reveals one aspect or the other.

Dual-aspect monism therefore has an epistemological as well as ontological dimension: how the one reality is approached dictates which aspect is engaged, whether from a “first-person” or “third-person” perspective. It is typically couched in the language of aspects and perspectives—inner and outer, subjective and objective, mental and physical, psychological and

physiological. In classic dual-aspect monism, as set out by Romanes (1895), there is no causal interaction, neither direct nor indirect, between mind and matter for the simple reason that they are two sides of the same coin. There is “only one stream of causation” (p. 86). A change in the brain is equally a change in the mind—they are one and the same change, apprehended objectively and subjectively. Mental and physical processes are not two different, interacting processes as the interactionist dualist claims. Nor are they just one physical process as the identity materialist claims. Rather, there is one process that has mental and physical sides to it.

For present purposes, classic dual-aspect monism is interesting because it places the mental aspect throughout nature rather than restricting it to brains. This does not necessarily mean that the mental aspect is high-level mind or that a thoroughgoing panpsychism is on offer. For example, Fechner first extended consciousness from humans and animals to plants, following a mystical experience that seemed to reveal to him the inner life of plants, and he later extended it to Earth, planets, the solar system, and stars, and the universe too (the “world-soul”), but his atoms are just points with no subjectivity, for consciousness, according to Fechner, is to be found in systems, not in basic units (Heidelberger, 2004). For Romanes (1895) too, the universe as a whole most likely has a very high-level mental aspect, the barely conceivable super-volitional, superpersonal “Superconscious” (pp. 105–109).

Theorists need not follow Fechner and Romanes by attributing a high-level mental aspect to the universe, but if dual-aspect monism does entertain such an aspect, then it might be able to accommodate the “cosmic” kinds of mystical experiences, characterized by expansive knowing, vision, love, and unity. Paranormal cognitions and actions and other phenomena, including flights of genius, might also be accommodated if our limited mental aspects can draw on higher-level mental aspects of the world, although the details would have to be worked out. In this volume, Velmans (Chapter 5) does apply his dual-aspect “reflexive monism” to mystical experiences, and although he only touches on the parapsychological phenomena, he does regard his philosophy as sufficiently “open” to be able to incorporate a range of them if the evidence warrants it.

To understand Velmans’s take on dual-aspect monism, it is important to recognize that he defines *mind* in terms of mental operations rather than consciousness. Mind is therefore not equated solely with perception, knowing, feeling, and volition as *conscious* activity. Rather, it consists of “psychological states or processes that may or may not have associated conscious contents.” This psychological definition does not commit to a specific metaphysical position on the nature of mind. For example, mental processes so defined could consist merely of information processing in a purely material brain, as some physicalists might contend, and need not be associated with consciousness at

all. But Velmans rejects physicalism for several reasons, and his analysis of perception leads him to conjecture that the human mind is “psychophysical,” having two complementary, mutually irreducible aspects. Viewed first person, from the inside, mental processes appear to be conscious experiences. Viewed third person, from the outside, mental processes appear to be brain states or other physical states. Evolutionary considerations lead Velmans to extend this dual-aspect analysis of the human mind to the world at large, resulting in a full-fledged dual-aspect monism according to which the universe itself is psychophysical, having experiential and physical aspects throughout. These are emergent from and supported by an ultimate “ground of being” that is identified with “Cosmic Mind.” According to Velmans, this is not idealism because there is no additional supreme consciousness from which it in turn derives, as in some idealist systems. Rather, Cosmic Mind, a creative, intelligent, transcendent “ground of being” that manifests the spatiotemporal universe, unifies its dual aspects since it incorporates both primordial pure consciousness *and* a primordial form of energy within the nature of its being.

Like the classic dual-aspect monisms of Fechner and Romanes, Velmans’s reflexive monism embraces cosmopsychism and is open toward panpsychism since the universe as a whole and many of its parts (if sufficiently integrated), large and small, will have a subjective aspect. Moreover, the conscious aspect of the universe will be far greater than that of the human mind. As noted before, Velmans maintains that his dual-aspect monism avoids the combination problem that besets constitutive panpsychisms. As for cosmopsychism, Velmans takes as his starting point Shani’s (2015) cosmopsychism, interpreting it as idealist, although it is not too clear what Shani intends, for he subscribes to a “lateral duplicity principle,” according to which the cosmic reality has a *dual* nature, having complementary “implicit” and “explicit” sides to it, a dual-aspect distinction that Shani finds paralleled in Russellian panpsychism (i.e., Goff’s “intrinsic” and “extrinsic” natures noted earlier).¹⁶ Because Velmans interprets Shani’s cosmopsychism as idealist, he raises the “inverse hard problem” (see below) against it; yet Velmans takes an approach similar to Shani’s when it comes to addressing the limitation or “decomposition” problem, the challenge of accounting for a multiplicity of subjects within the cosmic subject. For Shani also attributes dual aspects to the universe, and he accounts for the multiplicity by supposing that the explicit, physical aspect of the whole develops into individual structures, like whirlpools in an ocean, and each of these has its implicit, conscious aspect. Velmans’s explanation is not so different since he supposes that decomposition of the cosmic conscious aspect is driven by decomposition of the cosmic physical aspect (see Velmans’s chapter for details).

As for Velmans’s approach to mystical experience, he draws on the research of Stanislav Grof (1998), who describes two ways of experiencing

“the supreme principle in the universe or the ultimate reality” (pp. 29–30). These are encounters with (1) a consciousness that seems to contain all of existence and (2) pure consciousness of absolute nothingness, a void of cosmic proportions, a vacuum that is paradoxically a plenum, containing all things in potential. The former corresponds to cosmic consciousness and the latter to pure consciousness, although Grof’s vacuum–plenum characterization of the latter needs some scrutiny.¹⁷ Velmans brings his dual-aspect monism to bear on these two types of mystical experiences. The first type corresponds to direct experience or “real-ization” of the energetic, creative potential of Velmans’s transcendent Cosmic Mind, or ground of being. The second type, pure consciousness, corresponds to experience of the complementary, purely conscious aspect of the transcendent Cosmic Mind, or ground of being. Mystical experiences of both kinds are possible because our human minds are “direct expressions” of the dual-aspect ground of being.

Parapsychological phenomena are broached in Velmans’s postscript, where he discusses postmortem survival and psi phenomena (on the former, see the section “Postmortem Survival” below). Velmans approaches psi phenomena by pointing out that his dual-aspect Cosmic Mind has an information-processing dimension (remember his definition of “mind”). Our human perceptual and cognitive systems are very selective in their attention to and use of this greater sea of information since selection is necessary for survival purposes (an observation reminiscent of filter theory). But some nonsensory form of access to the sea of information may be possible, and the deep interconnections to be found there at the micro level, suggested by quantum physics, may correspond to deep “mental connectivity” between things that ordinarily appear unconnected. Psi cognitions and perhaps even psychokinesis may follow from this underlying connectivity. Velmans is well aware that he is only touching on the subject, and while not committed to the genuineness of some phenomena, he does ask that we do not prematurely “close our account with reality.”

Although dual-aspect monism can be attractive for its nonreductive embrace of both the mental and the physical, it has its difficulties. For one thing, it is not clear that aspect/perspective analogies and analysis offer deep insight into the mind–matter relation. The circle, we are told, has concave and convex aspects, viewed from inner and outer perspectives, and the coin has its obverse and reverse sides. So far, so good for circles and coins, but not so clearly appropriate for conscious states and physical states. The two sides of a coin are the same in kind, sharing the coin’s material constitution, and they are open to inspection in exactly the same way. For the dual-aspect monist, however, mental and physical aspects are not the same in kind and are not equally accessible. One consists of conscious mental states, immediately present to

the “first-person” perspective. The other consists of physical states, which in the case of more advanced organisms are brain states that correlate with conscious states. These brain states are examinable up to a point by neuroscientists through their “third-person” study of brains, but note that this kind of acquaintance is not immediate, taking place as it does through observations mediated by neuroscientists’ first-person experiences of their brain scanner readouts. The physical aspect is known only through the conscious mental aspect. There is an inequivalence here: mental and physical aspects are not epistemically coequal. Moreover, the relation between the physical brain state and the concomitant conscious mental state remains as elusive as it was in the dualist and materialist accounts of the mind–body relation. Why should an experiential green aspect be concomitant with a particular brain-state aspect?

The basic problem with dual-aspect monism is, I think, its retention of dualist categories even though it purports to be a monism. The mental and physical are joined together but are not fully integrated: inseparable, yes, but different enough to be concomitant and mutually irreducible. The dualist’s mental and physical categories are effectively left intact, although now glossed as epistemic rather than ontic when really both categories call for searching examination if they are to be brought together successfully. The material/physical category was constructed through a parsimonious allocation of properties that assigned only quantitative ones to the world at large, confining qualitative ones to conscious observers. But qualitative and quantitative properties are integrated in experience, and the mind–matter problem results from their artificial separation. The shift from substance dualism to epistemic aspect dualism does not address this fundamental mistake and brings no new insight, and so dual-aspect monism, although certainly an advance on dualism and physicalism and supportive of mind at large and panpsychism, fails to get to the heart of the problem. This, at least, will be the view of monists who take a more radical approach. For example, idealists can acknowledge the utility of talking about mental and physical aspects, about inner and outer perspectives, and so forth, but they will argue that the two are not coequal and mutually irreducible. For the idealist, talk about physical aspects is really talk about certain aspects of consciousness, say, about the extensional properties of its contents and their transformations. Precisely how this is formulated will differ between idealists.

NEUTRAL MONISM

Neutral monism does question the physical and mental categories, and it attempts to reduce both to a *tertium quid*, a “third thing.” If dual-aspect

monism maintains that the one stuff is *both* mental and physical, treating the two as inseparable, concomitant aspects, then neutral monism as its logical inverse would maintain that the one stuff is *neither* mental *nor* physical. But in practice, dual-aspect and neutral monisms can be hard to distinguish. Epistemic talk of “perspectives,” “aspects,” “descriptions,” and “complements” is shared by the two approaches, making them appear similar, and the line between the two is easily blurred when a neutral monism has elements that are *both* mental and physical or a dual-aspect monism posits a *neutral* basis (Stubenberg, 2018).

If neutral monism is to live up to its name, its “one stuff” should be psychophysically neutral, and the mental and physical will be derivative of it in some way. The derivation is often compositional, through connection of neutral elements into complexes that are either mental or physical or that are neutral but are deemed “mental” or “physical” depending on the epistemic stance taken. Alternatively, the derivation can be decompositional, through the breakdown of the neutral into the mental and physical. Harald Atmanspacher and his colleagues have pursued a decompositional model based on Jung and Pauli’s idea of a psychophysically neutral *unus mundus* that underpins synchronistic wild facts (on the *unus mundus*, see Main, Chapter 4 in this volume). Here there is an epistemic decomposition into complementary mental and material aspects and their correlations, an approach that contributes toward a classificatory framework for a range of exceptional experiences (e.g., Atmanspacher, 2012; Atmanspacher & Fach, 2015).¹⁸ The ontology is neutral, but the approach is described as “dual-aspect” because of the epistemic decomposition into mental and physical. Walach (e.g., 2005, 2019) also advocates a neutral or dual-aspect monism with a neutral substrate that has mental and physical aspects, and he makes reference again to Niels Bohr’s quantum notion of complementarity. In this volume, Atmanspacher’s dual-aspect approach is taken up by Jeffrey Kripal (Chapter 10), who finds it helpful for explicating his core idea of “the Human as Two,” and he values its applicability to the synchronistic phenomena, retaining as it does a clear dividing line between the mental and physical, the inner and the outer. However, Kripal explains that he is not committed to the “neutral” designation of the ontic reality, for “neutral” does not at all convey the tremendous quality of this reality as it manifests in extraordinary experiences. Indeed, he sometimes refers to this “superground” as Consciousness or Mind, reflecting his mystico-historical sources.

Just how “unneutral” the neutral reality can be shows in the “classic” neutral monisms of Ernst Mach, William James, and Bertrand Russell: they have sensation, experience, percepts, and the like as their supposedly neutral elements.¹⁹ On the face of it, these elements are hardly neutral, and all the better for it because a truly neutral basis would have its own discontinuity prob-

lems with both mind and matter, exacerbating rather than easing the mind–body problem. Mach (1914) is unambiguous that his rejection of Fechner’s dual-aspect monism does not entail the introduction of a third thing that is “unknown,” for Mach’s basic elements are none other than *experience*: “the view advocated here is different from Fechner’s conception of the physical and psychical as two different aspects of the one and same reality . . . we refuse to distinguish two different aspects of an unknown *tertium quid*” (p. 61).²⁰ Rather, there are just “the elements given in experience,” always the same in nature but appearing as physical or mental, depending on the connections between them. The phenomenal character of these classic “neutral” elements would seem to earn them a place in the “mind” category, and so classic neutral monism could be construed as low-grade or bottom-up idealism (or phenomenalism in the case of Mach since he rejects metaphysical inquiry beyond the sensory given), an experientialism in which higher-level mind is put together from low-level bits of mind, rather like the mind-stuff theory of W. K. Clifford (1878).

But classic neutral monism fends off the accusation that it is idealism by redefining mind so that it includes only certain phenomena, such as subjectivity, thought, emotion, and volition, and excludes qualitative properties, such as redness or saltiness, the “qualia” or “phenomenal qualities.” These are not deemed mental properties: they are “neutral” with respect to mind because, according to neutral monists, they can exist without being the experiences of subjects, of conscious minds. As Lockwood (1989) puts it, “phenomenal qualities” can exist “unsensed,” without being “objects of awareness” (pp. 156–171). Or, as Coleman (2014) puts it, qualia do not “necessarily exist for someone, a subject who experiences” (p. 39). Indeed, mental phenomena, including subjectivity, are special complexes or relations within the field of neutral elements, of “pure experience” (James’s term), and so there is no mind, subject, or ego independent of pure experience, no extrinsic consciousness that “has” experience. The intention here is laudable, to overcome dualisms of mental and physical, knower and known, subject and object, by unifying them within neutral, “pure” experience, but the suspicion remains that only by definitional sleight of hand have qualitative properties been shifted out of the mental category. Moreover, the idea that there can be qualitative properties without a subject is contentious and warrants close scrutiny.

Classic neutral monism can be panpsychist but not as thoroughly as classic dual-aspect monism and idealism, which have mentality everywhere in aspect or fundamental nature, respectively. For the compositional neutral monist, mind will arise *only* where special configurations of the so-called neutral elements come together. These configurations will be located in brains, as Russell suggests, but neutral monists could speculate that they are

distributed more widely through nature if some relatively simple combinations qualify as mental too. It has been argued that panpsychism in neutral monist mode avoids the subject combination problem, for the purported absence of subjects at the level of the “neutral” elements means there is no problematic summing of subjects into a new subject (Coleman, 2014). But even if it is true that qualitative properties do not require a subject, it is not clear that the combination problem in all its forms is averted, for even subjectless elements of experience may not be able to combine together unless they are already parts of one inclusive experience, an experiential continuum in which they can come together and combine. The lesson, then, may be to insist that experience is always total, a complete whole, and that the combination of elements takes place within an experiential continuum, in a cosmically inclusive field of experience.

Neutral monism has been applied to some of the wild facts. One notable example is Henri Bergson’s “image” metaphysics (if indeed it is a neutral monism). In combination with a filter theory of brain action, it was extended by Bergson (1920) from its original application to normal perception and memory to parapsychological phenomena and by Underhill (1912) to mystical phenomena. In normal perception, much of the cosmic totality of images is selectively eliminated by the brain and nervous system (Bergson’s principle of limitation), while in paranormal perception a little less is eliminated. In cosmic mystical experiences, elimination might cease altogether, although Bergson was resistant to the idea of total perception (Marshall, 2005). Bergson also allowed for the possibility of postmortem survival because he loosened the dependence of mind on the filtering brain and nervous system, the release from its constraints bringing wider and richer experiences after death (Barnard, 2011; Dongen, 2014).

Another neutral monist approach was taken by Whately Carington (1949).²¹ I raise it here, if only briefly, because it is based on Russellian monism, which has become prominent again in recent years (e.g., Goff, 2017), and it well illustrates neutral monism’s lack of confidence in personal survival. In the case of telepathy, association of ideas provides the mechanism: the association of two ideas X and K in mind A will bring up the idea X in a mind B that has been presented with the idea K (p. 206). Neutral monism is supposed to make this extended theory of association more plausible. True to Russellian neutral monism, Carington’s Radical Positivism has sense-data or “cognita” that are neutral for the reason that they have no external subject. In the common sea of cognita, “mind and mind” and “mind and body” lose their sharp distinctions, and minds are not insulated from one another. In this unified world, paranormal phenomena are viewed as more plausible. As for postmortem survival, Carington’s monism, like Goff’s (see above), does not support a stable, en-

during mind, self, or personality since they are constructed from cognita and therefore subject to disintegration. Carington is not perturbed by the dissolution of the “I-consciousness” or “personality-system” that we normally take to be ourselves since he views it as a “handicap or limitation” (pp. 244–245). However, he is impressed by the empirical evidence for survival furnished by gifted mediums and automatists, and he is therefore willing to entertain the possibility that at least some parts of the disintegrating personality-system remain intact for at least some period of time.

Classic neutral monism unifies subject and object by making them both contents of experience, and it therefore looks to be applicable to mystical experiences of the unitive or nondual kind in which self feels “immersed” in the environment (Marshall, 2005, pp. 252–254). The subject recognizes itself to be experiential content. In fact, Mach’s progress toward neutral monism was not merely an intellectual response to the dual-aspect monism and psychophysics of his mentor Fechner (Heidelberger, 2004). Mach (1914) described a unitive experience that took place in his late teens when on “a bright summer day in the open air,” he felt “the world with my ego” to be “*one* coherent mass of sensations,” although “more strongly coherent in the ego” (p. 30n1). By putting the observing subject within experience, classic neutral monism nicely captures this kind of unitive state, and it may appeal to Buddhists and Humean bundle theorists who attempt to reduce the self to contents of the experiential stream. Perhaps it is not surprising that the other advocates of classic neutral monism, James and Russell, had an interest in and degree of personal familiarity with mystical experience (Barnard, 1997; Rempel & Moran, 1993). Note again that this unitive kind of mystical experience—nondual or nonconceptual awareness of the world (Buddhist *nirvikalpa jñāna*)—is not the Advaitic “formless” consciousness that Albahari discusses or that Goff raises in his naturalization of mystical experience or the pure consciousness investigated by Stace and Forman. Rather, it is a content-rich experience that is nondual in the sense that it is free of distorting conceptual impositions, especially those that radically divide the experiential field into subject and object.²²

While neutral monism can support nondual experiences of limited scope, such as Mach’s unitive episode, it is less clearly applicable to the cosmic type, which is better approached through dual-aspect or idealist monisms. To account for an experience of cosmic mind, the neutral monist might have to suppose that, for the duration of the experience, all neutral elements in the entire universe assume an advanced mental configuration, which is an unreasonable burden to place on the universe (Marshall, 2005, pp. 258–259). Furthermore, if a universal mental configuration were to come together, everyone should have a cosmic mystical expansion too, but that

does not happen. When, in 1872, Maurice Bucke had his celebrated cosmic expansion in London, the rest of Victorian England did not join him. It makes more sense to suppose that the universe always has its cosmic mentality, idealist or dual-aspect, which is reflected in the realization by mystics that they have truly come home.

One further point of contact with mysticism is the neutral ontology of Atmanspacher's compositional dual-aspect monism. The Pauli–Jung *unus mundus*, the one world, is framed in a manner reminiscent of the Godhead of negative theology, the ineffable One (the “formless” consciousness again) from which the Many derive, a reality so beyond expression that all affirmative statements about it would be misleading if not counterbalanced by negations. The *unus mundus* is framed negatively—“no distinctions, no parts, no time, no space”—and therefore evades discursive attempts to know it. It is “unspeakable” or “ineffable” (Atmanspacher & Fach, 2019, pp. 17–18). Although the *unus mundus* is inaccessible to the discursive mind, it does not entirely exclude experience, as Jung himself acknowledged toward the end of his life (Main, Chapter 4 in this volume) and the literature of mystical experience suggests, for the apophatic path is not only a theological, linguistic exercise but also a practical stripping away of the everyday self and multiplicity in the contemplative ascent. The psychophysically neutral reality of dual-aspect neutral monism has become the mystical One.

While neutral monism has some limited application to the rogue phenomena and does take the trouble to interrogate the categories of the mental and physical (too often carried over uncritically from dualism), its recourse to a “neutral” stuff is problematic. For one thing, the so-called neutral elements of a workable neutral monism do not look to be neutral at all since they are qualitative properties. Classic neutral monism may really be a type of idealism, despite the efforts of its exponents to disassociate themselves from idealism.

IDEALIST MONISM

As a metaphysical position, idealism or idealist monism is the view that *all things are fundamentally mind*, where “mind” can include consciousness, perception, feeling, thought, imagination, will, and the like, understood as experiential realities. This is different from the panpsychist claim that all things have minds, for things can *have* minds without *being* mind. Idealism reduces the physical to the mental or, less commonly (and less satisfactorily), eliminates it altogether. Reductive idealism has a place for things commonly treated as physical, such as matter, space, and time, and so can engage with physical science, but it interprets physical things in experiential and mentalis-

tic terms. Nevertheless, idealism is sometimes dismissed as the mirror image of materialism and therefore plagued by an equivalent “hard problem”: just as materialists are challenged to derive consciousness from matter, so idealists are challenged to derive matter from consciousness. In this volume, Velmans (Chapter 5) calls this the “inverse hard problem” and raises it several times. Similarly, Walach (2020), another advocate of dual-aspect monism, claims that both materialists and idealists share the problem of “making plausible how a categorically completely different entity, matter, or consciousness can be derived from the original substance” (pp. 7–8). Here the residual dualism of dual-aspect monism shows through, for Walach assumes that matter and consciousness are “categorically completely different,” just as dualists do. But the dualist separation of matter and mind into completely different categories is precisely the problematic assumption that monists should challenge.

The claim that idealism is the mirror image of materialism is difficult to sustain. As Kelly points out in his “Background and Overview” for this volume, there is an asymmetry between materialist and idealist positions. One way to bring out the difference is to look at the treatment of qualitative and quantitative properties in the two approaches. Materialism has a hard problem because it *excludes* the qualitative properties from nature and then is at a loss to explain how brains, as parts of nature, can support experience and its qualitative properties. If idealism were truly the inverse of materialism, it would exclude quantitative properties from its world of experience, and it would then have difficulty explaining how things with quantitative properties, which at their most basic are extensions and their changes, arise from the purely qualitative. But idealism, at least in some versions, does not take this path. It recognizes that the contents of experience can have quantitative as well as qualitative properties. Take, for example, experience of a London bus: it involves extension, shape, and motion as well as red color, touch, and smell, all integrated in the field of experience. Experience is very often like this, a seamless integration of the quantitative and qualitative.

It is particularly notable that color and shape go together naturally.²³ Our visual fields are patchworks of colored surfaces, and we can speak of “color-shape” rather than “color” and “shape” separately. Corpuscular philosophy split the color-shape unity on display in visual experience, separating color and extension into categories of qualitative appearance and quantitative reality. But it is no great leap of imagination to suppose that extended bodies in general have colored surfaces and volumes. The idealist can suppose that experience at its most inclusive, as cosmically expansive experience, is like this, containing all extended, transforming structures in the universe as *luminous* structures, as color-shapes, including complex structures such as the brain and the more basic structures investigated by physical science. In this

way, idealists can have a natural place for matter and take on board scientific insights into it while understanding that it really consists of certain basic structures and transformations within experience. However, idealism is a big tent; idealists are under no obligation to follow this particular route, and they may approach the nature of matter in a different way.

Idealism and physicalism are asymmetrical in another respect: unlike the largely abstract entities of physicalism, the “stuff” of idealism is out in the open: experience, perception, subjectivity, knowing, thought, understanding, desire, emotion, imagination, and will. It is therefore on a much stronger footing than physicalism. Idealists can inspect their experiences to gain a sense of the world, in its qualitative and quantitative variety, if only partially and approximately. To gain a fuller sense of the world, they can inspect other, less familiar kinds of experiences, including mystical experience—hence the value of an expanded empiricism. This does not mean that idealists invariably pay attention to parapsychological and mystical experiences, although a few have. James (1909a) was surprised that the absolute idealists of his time had neglected the evidential value of these experiences despite the tenor of their philosophies being suggestive of “personal experience of some kind” (p. 308).

The neglect of mystical evidence has also been characteristic of modern technical discussions of panpsychism and cosmopsychism (and metaphysics in general), which typically focus on important but narrow questions about combination and limitation, without any hint of personal experiences that may have fed into these philosophical positions, experiences that can lead to major shifts or “flips” in metaphysical outlook (see Kripal, 2019) and that could provide a valuable resource for theorizing. For example, Chalmers (2020), discussing idealist cosmopsychism or “cosmic idealism,” rightly inquires, “What are the cosmic experiences like?” and makes a few relevant proposals (p. 364), suggesting, for example, that they might be perceptual, cognitive, or imaginative, but without drawing on the empirical study of cosmic consciousness and unitive mystical experiences of the natural world that has been ongoing since the late nineteenth century (Marshall, 2005). These experiences suggest that there is a cosmic level of consciousness (among other levels); that it is characterized by knowing, luminosity, and spatiotemporal inclusiveness (Marshall, 2015a); that it is a deeper level of our *own* consciousness; and that it is accessible to us, a possibility that discussions of cosmopsychism do not generally explore. It turns out that the subjectivity associated with the universe may be our own subjectivity at a deeper level, and “formless” or “pure” consciousness may be our subjectivity at an even deeper, hypercosmic level (Marshall, 2019).²⁴

Given the analytic character of Anglo-American philosophy as it developed in the twentieth century, it can be a surprise to find that, around the

beginning of that century, idealism was the major force in British philosophy, applied to metaphysical, epistemological, ethical, social, political, aesthetic, and religious matters, following in the wake of the German idealists, particularly Kant and Hegel and sometimes Leibniz. Several reasons have been given for its subsequent decline, cultural and philosophical: deflation of idealism's spiritual and moral optimism by the horrors of World War I, anti-German political sentiment, a seeming lack of idealist engagement with scientific developments, influential (but insubstantial) criticism by analytic opponents such as Bertrand Russell and G. E. Moore, and a more general loss of interest and confidence in metaphysics, including the antimetaphysical stance of logical positivism (Mander, 2011). For a long time, idealism faded from view, although work continued in the background, and there has been some renewed interest (e.g., Chalmers, 2020; Dunham, Grant, & Watson, 2011; Goldschmidt & Pearce, 2017). Nevertheless, consult a standard textbook on philosophy of mind, and there is a good chance that only physicalism and dualism will be found there. When idealism is mentioned, it is likely to be George Berkeley's eighteenth-century immaterialism, made to look foolish by oversimplification, and idealism in general caricatured as illusionist or antirealist. This is equivalent to taking Thomas Hobbes's seventeenth-century materialism as *the* representative of physicalism.

However, idealisms very often do not deny the reality of things, such as people, trees, and rocks, or less evident things, such as atoms, molecules, space, time, and the universe as a whole. Rather, they reinterpret them in terms of experience, mind, and relations between subjects. Space may be interpreted as the experiential field, time as experiential transformation, and spacetime as an all-encompassing experiential field that includes all temporal states. It is true that some idealisms give only a very thin account of things, turning them into surface phenomena with no depth, as if a tree were just a set of appearances in sense perceptions with no living reality of its own. *Phenomenalism*, sometimes considered a form of idealism or a distinct position in itself, does not look beyond sense perceptions to a more comprehensive world of objects and processes. It understands objects in terms of sense experience alone: when we make statements about things, like a tree or a brain or the spacetime universe, we are really talking about actual or possible sense experiences. Therefore, reference to anything beyond sense experience is dropped. Phenomenalism leaves much unexplained, including the contents, continuities, and regularities of sense perceptions, and so there is reason to go metaphysical and look behind the phenomena to something that supports and is perhaps partially represented in sense perceptions (Marshall 1992/2006, pp. 31–34). For these *realist* kinds of idealism, there is an “X” behind phenomena, and it is of the nature

of mind: one inclusive mind or many distinct minds and their experiential contents (see the section “Monism versus Pluralism” below).

Several versions of idealist philosophy have been brought to bear on the wild facts. For example, philosopher C. W. K. Mundle (1967), in his overview of psi theories, observed that “the metaphysical theory which most easily accommodates both telepathy and clairvoyance is Berkeley’s form of idealism” (p. 207). Mundle explained that telepathy is already there in Berkeley’s idealism, although not acknowledged as such, since finite minds receive their sense impressions directly from the infinite divine mind, which perceives the world in its archetypal, spatiotemporal entirety. Clairvoyance is just more telepathy, with God the agent and a finite mind the subject. Mundle therefore shows how idealism can overcome the long-troublesome distinction between telepathy and clairvoyance. Berkeley’s idealism provides a foundation for Lloyd’s (1999) explanations of paranormal phenomena, including synchronicity but not true precognition, which he rejects in favor of an open future (pp. 141–145). However, Lloyd’s idealism departs significantly from Berkeley’s by drawing on computer science and pooling the finite minds in one great mind, a monistic “metamind,” which contains metamental objects that, unlike Berkeley’s passive ideas, respond directly to requests from finite minds for sensory input (Marshall, 2001a). Berkeleian idealism can also be applied to postmortem survival, for its souls are immortal and will receive new kinds of perceptions after the death of the body. The character of these disembodied perceptions is not elaborated by Berkeley, but speculatively they may have an eternalistic feel since all times are equally present to the divine mind (Jakapi, 2007). There is a Berkeleian approach to precognition and the temporal inclusiveness of mystical experience in the making here if it can be explained how minds still associated with brains and bodies can receive ideas similar to those of the eternal divine mind. Responding to philosopher H. H. Price’s (1953) theory that postmortem experience is mind dependent, dreamlike, wish fulfilling, and telepathic, philosopher of religion John Hick (1976) gave more objectivity to the postmortem state of affairs by pointing out that Berkeleian idealism grounds this-life experience in the objectivity of the divine mind and can likewise ground afterlife experience there (see Becker, 1993).

German idealists of the nineteenth century are also relevant to the discussion, for they opposed Kant’s assertion that reality is unknowable and also recognized nonstandard ways of knowing in mystical states and dreams, and in trances induced by “animal magnetism” that bring clairvoyant visions and prophetic insights. Kant had insisted that access to reality, to the “things-in-themselves” or “noumena” behind phenomenal sense appearances, is always mediated by the human mind’s innate cognitive factors that order and syn-

thesize sensory intuitions, a processing that, among other things, introduces causal, temporal, and spatial structuring to the appearances. For Kant, neither reason nor mystical intuition can provide knowledge of the world as it is (Marshall, 2014). In their various ways, post-Kantian idealists challenged this view. Hegel dispensed with the rigid appearance–reality distinction: appearances are none other than reality showing us what it is, and this actuality, in its end or *telos*, is self-thinking thought or self-consciousness, fully realized only in the human being (as Glenn Magee explains in Chapter 6). Schopenhauer, however, retained the appearance–reality distinction, reframing it as a contrast between “representation,” comparable to the Kantian constructed appearances, and “will,” which is open to introspection. Our bodies present themselves to us in these two ways: “externally” as perceptual representations and “internally” as volitions that cause the body to move. Schopenhauer takes the latter, inner sense to be indicative of an inner will-aspect to every particular representation, not just our bodies (hence his panpsychism). It is reflected, for example, in the force that drives the flower or forms the crystal, in material attractions and repulsions, and gravity too—it is the Will, the incessantly striving, goalless, nonrational, singular thing-in-itself. Despite the language of inner and outer, this is not dual-aspect monism as described above because Will and representation are not coequal and mutually irreducible: representation is the “objectification” of Will, which is the primary reality.

Both Hegel and Schopenhauer approach psychical phenomena by grounding them in a kind of experience that is not structured by Kantian cognitive processing. As Magee observes, Hegel supposed that the phenomena follow from regression to and identity with a primitive part of the soul, the “feeling soul,” where distinctions of space and time and between individuals do not hold, for ultimately those distinctions are unfounded. In this unitive condition, perception and activity are not limited by narrow identifications, although Hegel views the phenomena as prerational and not of any significance, not in themselves, not for the development of consciousness, and not for philosophy. While Magee takes up Hegel’s basic insight into the transcendence of spatiotemporal and individual distinctions in psychical phenomena, he takes heed of the mystical evidence and finds unity too at a super-rational level of experience in which consciousness is far from dull and primitive. In mystical experience, at least the cosmic variety, abstract Hegelian philosophy comes alive as experiential realization: “I am the universe awake to itself,” proclaims the neo-Hegelian mystic. Magee posits a mystical modality of “Absolute Spirit,” additional to Hegel’s modalities of absolute knowing, art, and religion, a modality through which direct, nondiscursive knowledge of the whole is possible (a possibility that Hegel would not himself have countenanced, as Magee points out). But how is genuine identity with the universe

possible? Magee suggests that it follows from the deep interconnectedness of things, a “network” through which the mystic becomes conscious of the whole. The whole is now the mystic’s cosmic body and the network its “channels” and “nerves,” as Magee vividly puts it, if only metaphorically, to convey the holistic interrelatedness of things. By positing a hyperconscious level of identification, Magee rescues psi phenomena from Hegel’s characterization of them as pathological manifestations of the lower soul, for now they can be consciously initiated supernormal powers, or *siddhis*, dependent on conscious identification with things in meditative states.

Given the shared Kantian background, Schopenhauer’s understanding of the wild facts is not so different from Hegel’s, both involving transcendence of space and time, although Schopenhauer finds the transcendence not in regression to a Hegelian lower soul but in the inner apprehension of the thing-in-itself, beyond the spatiotemporality and causality of its representations (Gerding, 2014). There is, however, uncertainty over what exactly the mystic apprehends when complete denial of the will has been attained, for if the thing-in-itself is the blindly striving Will, the mystical state should not involve the tranquillity that Schopenhauer (1969, Vol. 1, p. 411) ascribes to it. The solution may be to suppose that there is more to the thing-in-itself than the world as Will (Wicks, 2019).

If Magee’s modification of Hegel elevates idealism into yet greater vistas of consciousness by introducing the idea of hyperconscious identification, Kastrup (Chapter 7 in this volume), in his “analytic idealism,” takes idealism into the nonrational, instinctual realm of the Schopenhauerian Will. Rejecting physicalism and constitutive panpsychism as untenable, he makes universal consciousness fundamental: it is “a spatially unbound field of subjectivity whose particular patterns of excitation give rise to the myriad qualities of empirical experience.” Kastrup’s language of “excitation” has a physical feel, alluding as it does to elementary particles as patterns of excitation in a quantum field. This is more than allusion, for Kastrup bluntly states that “a unified quantum field *is* universal consciousness.” More precisely, physical fields are descriptions of the physical world, and the physical world is how universal consciousness appears to us. Kastrup draws on quantum physics to help characterize this all-inclusive consciousness in which our individual minds are localized excitatory patterns. Interpreting quantum physics as indicative that the world out there has no definite state but consists of superposed possibilities, Kastrup understands universal consciousness or “transpersonal mental activity” as “multivalent thought processes” that have not yet crystallized into definite choices.

To explain the presence of our limited minds in the all-encompassing universal consciousness (i.e., to furnish a principle of limitation), Kastrup shifts

from physics to psychiatry: “dissociated mental complexes” or “alters” serve as a metaphor for individual minds in the universal mind. Now Kastrup’s language takes a Schopenhauerian turn with a “dual-perspective” discussion of first-person and third-person points of view, the former being conscious experience on this side of the “dissociative boundary” and the latter the representation of the outside mental environment on the “screen of perception” under the guise of matter. As Kastrup puts it, matter is “merely the name we give to what conscious inner life looks like *from across its dissociative boundary*.” This, in a nutshell, is Kastrup’s theory of matter. Schopenhauer is explicitly referenced when Kastrup comes to discuss the character of transpersonal mentation. We should not think of universal consciousness as advanced: it lacks self-consciousness, no “deliberation, reasoning, and planning,” which Kastrup infers from the stability and predictability of the laws of nature, suggestive of instinctual rather than advanced, self-conscious mind. This instinctual mind is most likely “along the lines of desire and fear” since “the universe’s movements and evolution suggest some form of basic volitional impetus.”

A distinctive feature of Kastrup’s idealism is its take on the quantitative–qualitative property distinction. He distinguishes between material, physical, measurable quantities, on the one hand, and experiential, felt qualities, on the other. The first have a highly localized place in his idealist world: “physical properties result . . . from an interaction between our own mental processes and the transpersonal mental processes within which we live,” an interaction that physicists call “observation or measurement.” His transpersonal world of mentation, the thing-in-itself, has no physical, measurable quantities, including extension: we merely represent in our own minds the world as having extension. In this one respect, universal consciousness is comparable to Cartesian mind, both being unextended. However, it is still valid to talk about universal consciousness in terms of extended fields and their excitations as long as it is realized that such talk applies only to the *appearances*. In itself, universal consciousness possesses only the felt qualities of thought/volition. Nor does universal consciousness have the felt qualities of perception, such as color, sounds, and flavors, for these are merely how the universal thoughts/volitons present themselves to us as dissociated alters. No alters, no perception.

Kastrup therefore excludes a wide range of felt qualities from universal consciousness, including color-shape qualities, and he is obliged to explain how to transition from the felt qualities of transpersonal mentation to the felt qualities of alter perception. He views the transition as unproblematic, for the discontinuity here is between felt qualities of different kinds, not between the measurable quantities and felt qualities of the standard hard problem. Still,

it is not at all obvious how to proceed from transpersonal mentation to the felt perceptual qualities if universal consciousness lacks all those perceptual qualities. Because of its parsimony, analytic idealism may have a mentation–perception “hard problem”: both extension and the felt qualities of perception are excluded from the world at large, leaving it with few resources to support perceptual experience. Clearly, we need to know more about the felt qualities of universal mentation to be able to understand the transition to perception since they will be unlike the felt qualities of our familiar conscious thinking, notably inner speech and visual imagery, which have perception-like sound and color-shape qualities, respectively. Kastrup (2018) does, however, provide an evolutionary explanation of the emergence of perception from mentation: referring to Donald Hoffman’s (2009) interface theory, he explains that percepts arise not because they show the world as it actually is but because they show the world in a way that facilitates survival and reproduction. They have a “fitness payoff.”

Kastrup’s response to the classic quantitative–qualitative property distinction is significantly different from the one I have advocated above. Kastrup excludes both extensional and perceptual qualities from the world at large, while I aim to keep extensional qualities there *and* reintroduce some perceptual qualities (notably color). I have been at pains to stress that extended structures and their transformations, which form the basis of length and time measurements and therefore of physical properties in general, are structures within an extended field of experience and that extension and color are inseparable there, indeed fully integrated. So rather than exclude perceptual contents, with their color and extensional qualities, from the world at large, I prefer to keep extensional quality there *and* fill the extended structures with color quality. The idea is to “put the color back in the world,” color that the corpuscularists drained from it—and perhaps reinstate some other excluded perceptual qualities too (Marshall, 2001b). Sound is one such possibility—or at least vibration as a felt quality of some kind. The world at large, which is the same as mind at large, will involve a vibrant, luminous expanse of extended contents.

Kastrup supposes that expansions of consciousness in mystical, near-death, and psychedelic experiences follow from an impairment of ordinary brain functioning that reduces dissociation from universal consciousness. There is, however, a potential difficulty here: if universal consciousness consists wholly of instinctual mentation, along the lines of desire and fear, as Kastrup supposes, it is not clear why mystical and near-death expansions typically bring extraordinary clarity of perception and depth of knowing, profound calm, and sometimes all-inclusive love, suggestive of advanced mind. Kastrup points toward a resolution to this apparent difficulty when he mentions that the instinctual, transpersonal consciousness is “qualitatively rich,” hint-

ing that there is more to the Schopenhauerian thing-in-itself than is commonly supposed. Magee's neo-Hegelian concept of a super-rational consciousness more explicitly addresses the highly noetic character of mystical experience, and the Hegelian emphasis on wholeness and holistic interconnection resonates with some of the unitive characteristics of mystical experience. As for psi phenomena, Kastrup does not address psychokinesis and precognition in his chapter because he feels that their explanation would require a thorough investigation of spacetime. However, he does draw on the metaphors of filter theory to suggest that, in telepathy and clairvoyance, the dissociative boundary may become "porous" or "permeable," which permits "information" to "percolate" through from universal consciousness. Velmans, too, we have seen, thinks of psi functioning as involving access to ordinarily hidden "information." Magee, by contrast, understands psi functioning, unconscious or consciously directed, to follow from *identification* with a greater level of mind, an identification that makes available the capacities of that mind.

Some themes present in Magee's and Kastrup's chapters are also evident in Federico Faggin's account of why "consciousness comes first" (Chapter 8). Faggin writes of cosmic holism and of "part-wholes" that share key properties of the whole because they emerge from the whole. This is reminiscent of Hegelian holistically dependent parts as described by Magee. Moreover, Faggin's postulated reality, or "One," is vaguely reminiscent of Hegel's "whole" and its progress toward self-consciousness: One, the "totality of what *potentially* and *actually* exists," is driven by an urge—by love, desire, curiosity—to "experience" and "know" itself, which means that the world and its development is in the service of One's self-knowing. Another commonality is the dual-perspective language: Faggin talks of "inner" and "outer" in a manner reminiscent of Kastrup's first-person and third-person perspectives. In both cases, the distinction is made within an idealist monism, not a dual-aspect monism like that of Velmans (although nowhere in his chapter does Faggin explicitly identify his metaphysics as "idealism"). Faggin distinguishes between the "inner semantic reality" of entities—that is, their qualia, self-knowing, meaning, and free will—and the "outer symbolic reality," the representation that supports communication between interacting entities.

Again, like Kastrup, Faggin brings quantum field theory into the discussion. He posits an inner dimension to quantum fields and the quantum vacuum: his "fundamental hypothesis" states that these fields have "the capacity to be conscious and to act with free will." Faggin is therefore in the company of those contemporary cosmopsychists, such as Shani and Goff, who speculate about the inner nature of quantum fields/vacuum or spacetime. More accurately, Faggin identifies the quantum entities with the outer aspect of his "consciousness units" and their combinations, part-wholes that

are selves characterized by consciousness, identity, and agency (free will), driven by incomplete knowing toward greater knowing, through which One's self-knowing advances. They are ontologically prior to matter, energy, space, and time—hence the idealist character of Faggin's system, which he calls the "CIP framework." A consciousness unit does not perceive the inner natures of other consciousness units directly, for these are private; rather, it perceives them through their outer symbolic representations. Only One, as the "interiority of all that exists," knows those inner natures.

Faggin's postulation of high-level units of consciousness that are our "larger selves" and that have a nonphysical mode of communication provides the background to his approach to rogue phenomena. Expansions of consciousness in mystical and near-death experiences can be put down to ego-consciousness becoming aware of its larger self, which is most likely to occur when it loses its ability to observe the physical world, as in near-death experiences. Other phenomena, such as lucid dreaming and out-of-body experiences, follow from reduced identification with the body. This plays a role in psi phenomena too, telepathy consisting of communication between the larger selves or between the egos in a manner not dependent on ordinary body-to-body communication. Faggin accepts the possibility of precognition as long as it does not violate free will. Again, this form of psi is dependent on the ego's larger self, which works behind the scenes to engineer precognition through its enhanced predictive powers. Note that Faggin's precognition is not precognition of an event that is "determinate," already existent in the future. Rather, it is a very good but not necessarily entirely accurate *prediction* made by the larger selves. These selves can only predict events, not know them in advance, for even they cannot know which way free-will choices will go. Faggin bases this view on a perceived incompatibility between free will and a determinate future, an incompatibility that Rosenberg, in his chapter on precognition, has shown to be unwarranted. It is clear from Faggin's treatment of precognition that his larger selves, although much greater than their dependent egos, are not so great as to include future states within their knowing. As for psychokinesis, this is possible because physical laws are not rigid, since physical reality is dependent on selves, and so the laws of physics can be temporarily modified. These modifications, however, are not "capricious," for they stay within "broader bounds currently unknown to us" (Faggin, personal communication).

MONADOLOGICAL IDEALISM

Faggin remarks that his consciousness units are "conceptually similar" to Leibniz's basic units of perception, the monads. There are indeed similari-

ties: both kinds of units are mindlike; both are wholes (or at least “part-wholes” in the case of consciousness units); both are ontologically prior to space, time, and matter; both have an indirect sense of their fellow units; both are striving beings; and both emerge from a prior reality, One and God, respectively. No doubt there are significant differences too. Faggin’s One, as the totality of potential and actual existence, is different from Leibniz’s God, and Faggin’s consciousness units, which come into being sequentially as self-perceptions of One, differ from Leibniz’s monads, which are set up together by God at the creation.

Leibniz’s metaphysics is applicable to the rogue phenomena, although it requires modification if it is to support mystical expansions of consciousness and cases of the reincarnation type. I have described the metaphysics and its modification in detail elsewhere (Marshall, 2015b, 2019) and give only a brief overview here. Leibniz’s theory of monads, the “monadology,” is open to interpretation, but understood in idealist fashion it takes the universe to have concrete existence only as a collection of monads, a multiplicity of self-contained, mindlike entities characterized by *perception* and *appetition*. Perception is the monad’s internal representation of external things (other monads), while appetite is its striving, its dynamic tendency to have new perceptions. It could therefore be said that monads have two fundamental “aspects,” but this is no dual-aspect monism, for both perception and appetite are mental or mindlike properties, and the material/physical is reducible to them—hence the idealism. By taking perception and appetite to be fundamental, Leibniz has treated his own experience as a human being as more or less indicative of the nature of the world in general (as Schopenhauer, Whitehead, Russell, and others were to do): it is perceptual/cognitive and appetitive/volitional, reflective of the intellect and will of its divine creator.²⁵

Monads are subjects with cosmic perceptions. These are spatially and temporally inclusive because a monad, by perceptually representing within itself all other monads from its own sequence of vantage points, expresses the entire universe. Monads differ in the distinctness of their perceptions, which are confused and unconscious for the most part, lacking discrimination, although more advanced monads, those that represent themselves as having animal and human bodies endowed with sense organs and nervous systems, have more distinct perception in the form of sensation and mental representation. Note that in Leibniz’s idealist scheme, “perception” is the more foundational term than “mind” or “consciousness,” for most perception is extremely indistinct. Perception is essential to the constitution of all monads, including the most primitive and stuporous (“bare monads”), while sensation, consciousness, and basic mental representation, including memory, begin with animal-bodied monads (“souls”), and advanced mental representation, including

“apperceptive” reflective knowledge of inner states or self-consciousness, with human-bodied monads (“rational souls” or “minds”). Like perception, appetite at its most basic is unconscious, but in more developed monads it also takes the form of conscious appetites, desires, volition, and even a rational seeking after the good.

There is no concrete universe apart from the cosmic monadic perceptions, and so matter, space, and time have to be understood in terms of changing monadic perceptions and the way they represent one another. Matter, space, and time, although “well-founded phenomena,” are not basic. They are appearances but appearances grounded in reals, which for Leibniz are the monads and their divine source, a source that synchronizes them at their creation. More specifically, matter is the representation of configurations of basic monads in the perceptions of other monads. Physics, as the science of matter in motion, could be dubbed the behavioral psychology of very dull, passive minds, whose behaviors show little or no variation and are therefore describable by “laws” and largely predictable. Or, as C. S. Peirce put it in his objective idealism, drawing on Schelling, “matter is effete mind, inveterate habits becoming physical laws” (Crabtree, 2015, pp. 428–429).

The monadology is a kind of panpsychism or panexperientialism, a “pan-perceptualism” in which the elementary units of the world are perceptual and appetitive. Put very loosely, minerals, plants, and animals are full of monads (or, better, representations of monads), although only organisms, not aggregates, have a chief monad, a central or dominant monad, a rational soul in the case of humans. As a special kind of panpsychism, monadology avoids the combination problem of constitutive micropsychism (Basile, 2010; Blamauer, 2011; Marshall, 2005, 2015b; McDonnell, 2019; Seager, 2001). A monadic subject, as a true unity—a seamless, cosmic, perceptual whole—is not compounded of other subjects. There is no combining of micro-subjects to generate macro-subjects. But a monad does represent within its perceptual continuum all the other monadic subjects, and configurations of these representations make up what we take to be material bodies.

The monadology can perhaps be construed as a type of cosmopsychism too: a monad is a cosmic subject, perceiving the entire universe as its object. But if this is cosmopsychism, it is a special kind because the universe is multiply expressed in the perceptions of the many monadic subjects. The limitation problem is not serious for monadology, for the multiplicity of subjects is built into the system at the start. Each monadic perception is by definition a cosmic representation of the many in one. Still, it is necessary to account for the limited scope of a monad’s *conscious* perceptions. The principle of limitation in Leibniz’s system is “matter,” which in the idealist reading is simply confusion, the confused representation of configurations of other monads and

the passivity that follows from confused representation (Marshall, 2015b). Anticipating filter theory, Leibniz explains that this confusion is beneficial to organisms because it keeps unconscious what would be a distracting host of perceptions and disagreeable appetitions (Marshall, 2019, p. 392n97). Leibnizian monadology has, of course, its own well-known theoretical hurdles, notably the causal self-sufficiency of the all-inclusive monadic subjects, their preestablished harmony with one another, and their dependence on a supreme divine mind. Over the centuries, the system has been adjusted or extensively reformulated by many thinkers, some of whom have fitted windows and doors into the monads and evicted God from the system.

I shall not dwell here on the application of monadology to psi, synchronicity, postmortem survival, and mystical phenomena, for I gave an account in *BP* (Marshall, 2015b).²⁶ There I took up Price's (1960) observation: "Of all the great classical philosophers, I sometimes think that Leibniz is the one whose ideas are most suggestive for the Psychical Researcher" (p. 78). Price explained that Leibniz's metaphysics makes the paranormal completely normal since monads contain a universe of subconscious perception. Monads are latently omniscient and so in principle could know anything if some of those subconscious perceptions make their way into consciousness (Price draws on filter theory). Clairvoyance (matter-to-mind cognition) is understood as a form of telepathy (mind-to-mind cognition), and precognition and retrocognition are understood similarly. Leibnizian monads, as complete units, carry with them their past and future, and Leibniz himself was of the opinion that his metaphysics was consistent with precognition or "prophecy" (Cook, 1998).

However, to account for mystical expansions of consciousness, including the very expansive cosmic variety, it is necessary to revise Leibnizian monadic perception by removing its inherent confusion and making it fully distinct, a very major change to the theory (Marshall, 2015b, 2019). Confusion now pertains to a monad's limited, body-mediated, sensory representations, while its total monadic representations are perfectly clear. Without this inversion, a monad could never expand its very limited field of perceptual distinctness. The evidence suggests that expansions of consciousness do occur, and so the theory of monads is in need of modification (it is also necessary to modify Leibniz's monadology to support reincarnation—see the section "Postmortem Survival" below). Monadology can also be used as a basis for explaining mystical experiences other than the full-blown cosmic variety. For example, "panpsychic" intuitions of conscious beings in nature would follow when mystics begin to access their deeper perceptions, for there the multiplicity of fellow subjects is represented (Marshall, 2015b, 2019),²⁷ and experiences of divine presence or unity with a higher self, God, or supreme

reality would follow as a monad discovers its cosmic selfhood and rootedness in the supreme emanative source from which it derives (Marshall, 2019).

Given the applicability of Leibniz's thought to the wild facts, it should be no surprise that Whitehead's process philosophy, with its debts to Leibniz, is also applicable to a range of the phenomena, as Griffin (1993, 1997) has shown in detail (see E. F. Kelly, 2007, 2015b; Weiss, 2015). A Whiteheadian approach will be roughly similar in style to a Leibnizian one, although Whitehead's significant divergences from Leibniz mean that there will be differences too. For example, the open future of Whitehead's process philosophy means that precognition is not accepted as genuine by Griffin (as Bob Rosenberg notes in Chapter 3).

MONISM VERSUS PLURALISM

For idealists, the "X" behind phenomena is not insuperably mysterious: it is mind or mindlike, one mind or many minds—*numerical* monism and pluralism, respectively. Numerical monism is the view that only *one* concrete thing really exists, the whole, the indivisible, the world, the cosmos.²⁸ Let's call this view "monistic" and contrast it with "pluralistic." Monism in the numerical sense is to be distinguished from monism in the substance sense, which is the claim that there is just one basic *kind* of substance, as idealist, materialist, dual-aspect, and neutral monists claim in their various ways. Let's use "monist" to refer to this one-substance position and contrast it with "dualist," its common antithesis. For example, idealism is "monist" because it claims there is just the one basic kind of substance "mind" (or experience, perception, will, and so forth), but it can be "monistic" or "pluralistic"—the former if it posits just one concrete *instance* of mind, the latter if it posits many instances.

As usual, distinctions are not as straightforward as they might appear. In the case of idealism, the singular "one mind" or "total experience" of monistic idealism is typically a whole that includes within itself a plurality of dependent, subsidiary minds that are attributed some degree of reality of their own—a "many *in One*." Monism that admits the existence of these real but dependent parts has been called "priority monism," for it gives priority to the whole, and it is contrasted with uncompromising "existence monism" that recognizes only the reality of the whole (Schaffer, 2010). Hegel's metaphysics, as described by Magee in Chapter 6, looks like a priority monism and similarly the idealisms of subsequent absolute idealists, with their all-inclusive Absolute or Eternal Consciousness. For example, F. H. Bradley placed numerous "finite centers of experience" in the Absolute, comparable in some respects to Leibnizian monadic centers but dependent parts of the

one total experience (Phemister, 2016). More recently, Sprigge (2006) has followed a similar path in his panpsychic idealism, and some present-day cosmopsychists also offer priority monisms. Conversely, the “many minds” of pluralistic idealism can depend on one supreme mind without being subsumed by it—a “many *plus* One.” Berkeley’s idealism has its many finite minds distinct from the infinite divine mind but dependent on it for their ideas of sense. Leibniz’s monadological idealism, in part a pluralistic response to Spinoza’s monistic philosophy, has an infinite number of minds or mind-like beings derivative of and dependent on the divine mind, but each a self-contained totality, unlike Berkeley’s finite minds.

In the heyday of Anglo-American idealism, both monistic and pluralistic varieties were represented, the former indebted to Hegel (e.g., Bradley, T. H. Green, Bernard Bosanquet, Josiah Royce) and the latter often a reaction against the totalizing thrust of Hegelianism, which according to its critics makes finite individuals less than real by subordinating them to the Absolute. Pluralistic responses took the form of personal idealisms (e.g., A. S. Pringle-Pattison and Hastings Rashdall) and monadological idealisms (e.g., James Ward and J. M. E. McTaggart).²⁹ Whitehead can be included among the latter if it is allowed that his process philosophy, as a radical transformation of Leibnizian monadology, is a form of pluralistic idealism given that its actual occasions are perceptual, striving subjects and therefore mindlike (Basile, 2009). In *A Pluralistic Universe*, James (1909a) had offered a pluralistic alternative too, with the “each-form” set against monistic idealism’s “all-form” and drawing inspiration from Fechner and Bergson (Slater, 2014; Sprigge, 1993).

In *BP*, the contrast between numerical monisms and pluralisms received some attention, centered on James’s critique of absolute idealism (Kelly, 2015b). There, James was preferred for his distrust of abstract reasoning alone as the path to philosophical truth and for his associated advocacy of an expanded empiricism. His ethical and aesthetic dissatisfaction with absolutism also struck a chord. But even if James’s (1909a) hostile characterization of absolute idealism—that “unintelligible pantheistic monster”—were justified (pp. 46, 316), the possibility remains that some kind of idealist priority monism, respectful of the finite for its intrinsic value and receptive toward a broad empiricism, could be a strong candidate metaphysics. In this volume, the monistic outlook is represented by Magee’s discussion of Hegelian and neo-Hegelian idealism, a numerical monism because the universe is taken to be the only truly concrete individual (“the true is the whole”), yet a priority monism because dependent parts are recognized too, even if they are “abstractions” from the whole. As Magee puts it, “Each thing is what it is by virtue of its place within the whole,” through its relations with all other parts

of the whole and through the immanence of the whole in the part. Kastrup's analytic idealism is monistic too, with its one universal consciousness that contains dissociated alters, while Faggin's philosophy of "consciousness units" has a more pluralistic feel. Donald Hoffman's (2008, 2019) "conscious realism" deserves mention too, for it maintains that the world consists of "conscious agents" and that consciousness is fundamental. It therefore counts as a pluralistic idealism or at least phenomenism. Velmans's reflexive monism is monistic, although it does have a multiplicity of agents as manifestations of its transcendent ontology, perhaps even monadlike units at a deep level, understood to be psychophysical, as is everything else in Velmans's dual-aspect monism.

Given these options, and many others, too—monistic and pluralistic, dual-aspect, neutral monist, and idealist—how can one go about deciding between them? They can, of course, be studied for their cogency as solutions to the mind-body problem, including the effectiveness with which they tackle the problematic property distinction; the nature of matter, space, and time; and the perceptual process. They can also be appraised in Jamesian fashion as "working hypotheses," informed by and tested against a range of accredited and wild facts. It is often said that idealism was found wanting in the former respect, unwilling or unable to engage with late nineteenth and early twentieth-century developments in the physical and biological sciences. This may be true of the absolutism represented by Bradley, but it is hardly applicable to the monadological pluralisms represented by Ward, Whitehead, and H. Wildon Carr, who took an interest in the sciences of the day. In this volume, we have Faggin's pluralistic engagement with quantum physics and information theory, albeit information made "live" and meaningful, and his aspiration to derive physics from his consciousness units. In this, he matches Hoffman's (2019) ambition to "turn conscious realism into a science" through a mathematics of conscious agents and their networks, showing how conscious agents "generate spacetime, objects, physical dynamics, and evolutionary dynamics" and get "back quantum theory and general relativity" (pp. 184–185). Although Hoffman's conscious realism in its current form looks too slender to ground such an ambitious project, the general outlook can be applauded, including Faggin's comparable aspiration, which is to "explain the concepts of space, time, matter, and energy . . . from the nature of CUs [consciousness units]" and uncover "a physics we do not know yet."

Does it follow, then, that pluralistic metaphysics, also represented by Whiteheadian approaches, is more capable of providing a cogent framework for modern physics than its monistic rivals? It would be premature to answer in the affirmative without first looking into the scientific relevance of the monistic alternatives. Absolute idealism's insistence that there are

no isolated entities, all things having the whole implicit as their ultimate context, resonates with holistic tendencies in modern science, including ecological and quantum holisms. In his chapter, Magee points out that Erroll Harris in particular argued for the relevance of Hegel's metaphysics to contemporary science, including physics and biology. Magee's Hegelian holism—all things interrelated and each defined by its place in the whole—has resonances with Leibnizian metaphysics, with its mutually representative, cosmic monads and also with the mystical literature, which contains some descriptions of profound interconnection and “interpenetration” (Marshall, 2019). Kastrup (2017) has also engaged with the scientific literature, making a case that his analytic idealism is consistent with Carlo Rovelli's relational interpretation of quantum physics.

While monistic philosophies are real contenders and benefit from the simplicity and numerical parsimony that comes from all things being included in just one whole, I am drawn to pluralistic idealism of the monadological kind for several reasons. For one thing, monadology has a very definite concept of the basic unit at the root of material structure: this is the monad, which today may be open to mathematical modeling. If cosmologists can model the universe (its shape, dimensionality, internal structure, and evolution), as they routinely attempt to do, then so, too, can the monad be modeled since it is expressive of the universe. It may even be possible to construct testable models of monadology. For another, its organization of experience into multiple cosmic perspectives is suggestive of the frame dependence of relativistic physics, and its holism of mutually representative cosmic units provides one of several entry points into the quantum world (for details, see Marshall, 2019). It seems possible that fundamental physics has been hinting at the monadological structure of reality for more than a century. Monadology also better captures the plurality of cosmic mystical experiences and cosmic subjects (Marshall, 2019). In a monistic scheme, there would be just one cosmic perspective, that of the one cosmic subject. But cosmic consciousness is a democratic affair, open to many individuals if the mystical reports are to be believed, each accessing it from their own spatiotemporal vantage point, which suggests again that consciousness at the cosmic level is organized not from one perspective but from many.

POSTMORTEM SURVIVAL

If consciousness is produced by, dependent on, or identical to brain processes, as physicalists maintain, then it will be snuffed out when the brain ceases to function at death, not just brute awareness but also perception, memory,

knowing, thinking, feeling, indeed all mental phenomena from the most basic to the most refined. Not a smidgen of self will remain, never mind the subtleties of personhood. There is, however, a substantial body of evidence that neurophysiological shutdown of the brain is not the terminal event it appears to be. It was this kind of evidence that originally set the Sursem wheels turning in the late 1990s, as Michael Murphy explains in the preface to this volume. *IM* emerged from those Sursem meetings, bringing together and examining evidence for postmortem survival and much else that challenges physicalist preconceptions.

One conclusion forthcoming from these explorations was this: the survival evidence is better addressed by the “survival hypothesis,” according to which something really does survive death, than by the “super-psi hypothesis” or more specifically the “living-agent psi hypothesis,” according to which information apparently gleaned from sources beyond the grave really comes from psi communication involving only living persons (e.g., a medium acquires information from a sitter, distant relative, or written records, not from a discarnate entity). Phenomena supportive of the conclusion were mediumistic cases involving proxy sitters and drop-in communicators, cases of the reincarnation kind, and near-death experiences under extreme physiological conditions (E. F. Kelly, 2007, p. 598). In *BP*, evidence for postmortem survival was summarized—trance mediumship, cases of the reincarnation type, and crisis apparitions—and again it was emphasized that the evidence is abundant and can be of high quality, as anyone who takes the time to examine it in detail and with an open mind will discover (Kelly, 2015b, pp. 6–13). Moreover, the type of survival indicated by the data is not just the persistence of a simple or rudimentary consciousness after death, which in itself would be startling from a physicalist perspective, but also personal survival of some kind, as suggested by the mediumship and reincarnation data.

In this volume, data challenging to the production theory of mind and supportive of survival are presented by Bruce Greyson (Chapter 1) and Jim Tucker (Chapter 2). For example, Greyson runs through features of near-death experience that are theoretically challenging to a conventional neuroscientific position, including accurate perceptions from vantage points outside the body and clarity of mind when the compromised state of the brain should preclude it. Experience of some complexity, indeed superior in some ways to ordinary experience, occurs when brain activity normally associated with such experience is no longer detectable. Encounters with deceased persons are specifically relevant to the question of personal survival, and some of these cases are not easily put down to hallucination induced by expectation or fear of the prospect of death, as Greyson explains. For example, encounters sometimes take place with persons who were not known to have

died. Tucker, in his chapter, points out that strong cases of the reincarnation type are very difficult to explain within the confines of a physicalist understanding of the mind–body relation, for it would require that memories be encoded in a material substrate capable of leaving the body at death, remain intact for a potentially very long period, and eventually find their way to and inform a child conceived and born potentially very far away. Psi-based “living-agent” explanations of cases of the reincarnation type have been raised, as Tucker discusses, but these have shortcomings, leaving survival as the most likely option, and Tucker concludes that explanatory frameworks should “allow for some type of continuation of experience after bodily death, one in which memories and emotions from a life that has ended become associated with a subsequent life.”

One such framework supportive of survival took center stage in *IM* (Kelly, 2007) and was highlighted again in *BP* (Kelly, 2015b, pp. 514–518)—namely, the model of human psychological constitution set out by Frederic Myers (1903) in his *Human Personality and Its Survival of Bodily Death* and taken in a philosophical direction by William James in *A Pluralistic Universe*. In this model, the everyday “supraliminal self” is set within a much more extensive consciousness, the Subliminal Self, which is capable of surviving bodily death and preserving personality. Although James himself would not go so far as to accept full-blown personal survival (see below), he was attracted to Myers’s model, for it allowed consciousness to be simultaneously part of a greater whole and the greater whole itself. Taking the idea further by drawing on Fechner, James could envisage yet more inclusive levels of consciousness beyond the Subliminal Self, extending in comprehensiveness toward, if not matching, the all-inclusive Absolute asserted by contemporary idealists such as Bradley. Some theories described in Part II of this volume also posit more inclusive selves, notably Jung’s psychological distinction between the ego and self, which Roderick Main explores in Chapter 4, making the point that the self is not originally a superconscious self but becomes the integrative center of a conscious whole through the development of the ego.³⁰ Federico Faggin’s metaphysics is explicit in positing higher-level selves, the most profound being “One” itself and those larger selves of which our egos are “only a small portion” and that exist “independently from the body” (Chapter 8). The revised Leibnizian monadology I introduced earlier also has comprehensive selves—namely, the monads, which, unlike Leibnizian ones, have perfectly distinct perceptions yet take part in a panentheistic evolutionary process in which limited, developing selves and their series of lives play an essential role (for details, see Marshall, 2019).

Whether or not a metaphysics has a place for more comprehensive selves, it should at least take heed of the empirical evidence, which suggests that per-

sonal survival can take place, although the details of when, how, and why are far from clear. Impersonal survival through reversion to a fundamental consciousness is not the only possible postmortem outcome. Metaphysical theories can therefore be evaluated on their ability to support personal survival of some sort. If a theory requires ad hoc adjustments for it to support personal survival, then it is probably on the wrong track. Ideally, the metaphysics should have a robust concept of individual identity built into it from the start if it is going to be able to support personal survival in the full sense. While it would be an overgeneralization to claim that the possibility of personal survival/reincarnation is better supported by pluralistic systems than monistic ones, it is the case that the latter do tend to view individuals as ephemeral parts of the whole, comparable to waves or whirlpools in the ocean and therefore highly susceptible to disintegration and at best preservable as memories amalgamated in the whole. Thus, Spinoza's monistic metaphysics does not appear to be consistent with personal immortality, although the question has been debated (Nadler, 2001). James's (1909a) poetic account of immortality in Fechner's dual-aspect universe gives a sense of the limited nature of survival in a monistic universe, where "our outlived private experiences" are "impressed on the whole earth-mind as memories" (p. 172). We survive only as memories in the mother-sea of subliminal consciousness. James (1909b) absorbs this perspective into his pluralistic philosophy, declaring that there must be a "common reservoir of consciousness" in which memories are stored—otherwise mediums would not have access to them (p. 589).

Several of our monistic contributors to Part II in this volume are not confident that their systems are consistent with personal survival. According to Velmans's reflexive monism, all manifest things eventually revert to their origin, the indestructible "ground of being" that is both consciousness and energy. Consciousness/energy is not extinguished, but can there be anything other than the supreme pure consciousness/energy that survives? Although not compelled to do so by his philosophy, Velmans does accept the possibility of individual survival and reincarnation if the ground of being in its primordial manifestations produces monadlike entities, as long as these are sufficiently individualized to support an evolving identity across lifetimes. Thus, to support continued identity, Velmans thinks it necessary to introduce plurality at a very deep level of his monistic system. Magee does not discuss postmortem survival in his chapter, but he is of the opinion that Hegel's metaphysics provides no foundation on which to justify personal survival (Magee, personal communication). Apparently, Hegel does not consider the possibility, and his monistic philosophy gives us no reason to think that individual selfhood would endure. However, an individual human life does contribute to the whole because it is the way in which the

universe becomes self-conscious. Moreover, Magee points out that Hegel invites us to question the nature of selfhood, and this may lead us to find our true identity in the whole, in the Absolute.

Likewise, Kastrup's monistic idealism does not lead naturally to an expectation of personal survival: a much more likely scenario, according to Kastrup, is reabsorption of dissociated alters into universal consciousness. This might sound bleak since Kastrup's universal consciousness is low-grade volition, devoid of higher mental capacities. But Kastrup speculates, in somewhat Hegelian fashion, that universal consciousness becomes self-conscious to some degree through the development of human self-consciousness. So while human personalities disintegrate, their memories and insights are released into universal consciousness and add to it. More than this, the *essence* of what we are survives, for this essential "I" is the "I" of universal consciousness. While there is no personal survival, the "true identity" remains—a typically monistic position. Goff (2019) too, in his speculations about formless consciousness as the intrinsic nature of spacetime, takes a similar line: if there is life after death, it will not be personal survival—just reversion to the impersonal formless consciousness.

Faggin's philosophy, with its deeply ingrained plurality of consciousness units, is friendly toward personal survival. He explains that when the body dies, ego-consciousness will lose its ability to observe the physical world but will retain its connection to the larger consciousness that supports it. So there is survival of ego-consciousness and even discovery of a true self in the greater consciousness. Faggin speculates that reincarnation is comparable to an astronaut who learns to fly a lunar lander through a series of sessions in a simulator. In the analogy, the series of sessions stands for a series of lives, and the debriefings between the sessions equate to postmortem reflection and assisted learning through which the larger self matures. Faggin could equally have used his virtual reality analogy of "users" and their "avatar" representations in computer gaming, but the astronaut analogy is more expressive of the great journey on which he believes we are engaged.

Leibnizian monadological idealism, with its deep-rooted pluralism, does support continuation of identity after death. Monads, as simple, uncompounded substances, are indestructible, and there is no real death, just transformation of the body associated with the monad. Moreover, personal survival is guaranteed by the monad's all-inclusive perceptions, which "retain impressions of everything which has previously happened to it," as Leibniz puts it (Marshall, 2015b, p. 413). It was in part the immortality of monads and their immunity to total reabsorption into their divine ground that recommended them to nineteenth-century occultists who described an evolutionary process of transmigration through the natural world (Marshall, 2019).

However, monadology requires modification in light of some death-related phenomena. For example, Leibniz's monadology would lead us to think that the perceptions of a human-bodied monad will become much less distinct at death, when the sense organs fail, leaving only highly confused perception. However, near-death experiences can be taken to indicate that a great expansion and clarification of perception takes place at death. The inverted perceptual structure of monads that I suggested earlier, according to which basic monadic perception is perfectly distinct, fits better with the near-death and mystical evidence. Moreover, while Leibnizian monadology supports a special kind of transmigration for subrational monads, a "metamorphosis" in which monads are never fully divested of their bodies, it does not allow transmigration for rational beings, such as human-bodied monads. If the data on cases of the reincarnation type are taken seriously, as indeed they should be, then monadology would do well to dispense with its artificial distinction between the afterlife trajectories of subrational and rational monads and admit that human monads can pass from life to life (Marshall, 2019).

Personal survival is not so certain in Whiteheadian pluralism given the more fragile, ephemeral nature of Whitehead's basic units. Leibniz's monads are extremely robust, while Whitehead's "actual occasions" are fleeting pulses of experience, and the only "afterlife" they have individually after their loss of subjectivity is objectification in the consequent nature of God (Marshall, 2019). However, this does not mean that postmortem survival is impossible, for the *society* of actual occasions that constitutes a mind could conceivably persist after death, and perception and activity would no longer depend on the body of actual occasions that formerly supported the mind (Griffin, 1993). This postmortem scenario, endorsed by Griffin, has been extended to include continuation of identity across many lives by Weiss (2012, 2015). Matlock (2019) too takes Whitehead's process philosophy as a starting point for his idealist "processual soul theory," combining it with the idea of subliminal consciousness to provide a framework for personal survival and reincarnation.

COSMOPSYCHISM, GOD, AND EVOLUTION

Cosmopsychism attributes consciousness to the universe as a whole, a move that can take the discussion in a theological direction. The question arises as to whether the consciousness attributed to the universe can justifiably be equated with God or some other exalted reality described in the religious traditions, such as Brahman of Advaita Vedanta (e.g., Albahari, 2020; Gasparri, 2019; Leidenhag, 2019). If the consciousness of the cosmos is

rudimentary, there may be little incentive to identify it with God. If it is advanced, the identification may appear more appropriate, depending on whether the consciousness lives up to expectations. Some theists will require that the consciousness has attributes of personhood, intelligence, free will, creativity, and benevolence at the very least to qualify as God, while intelligence and creativity might suffice for others.

When God and the consciousness of the cosmos are identified, the cosmopsychism will be a type of *pantheism*, as it was for the Stoics, for pantheism holds that God and the universe are one and the same. While pantheists have often viewed their God as impersonal, there have been exceptions, including Spinoza, Fechner, and Sprigge (Mander, 2020). For Romanes (1895), the superconscious aspect of the universe is superpersonal (i.e., inconceivably personal), and communion with it in prayer is possible (p. 111). But cosmopsychism can be integrated with other positions on the God–world relation. For example, if the universe and its consciousness are taken to be secondary to a consciousness ontologically transcendent to the universe, whether a pure consciousness or a creative divine mind, then God could be identified with *just* that transcendent consciousness or mind and not the cosmic one. Alternatively, God could be identified with *both* the transcendent consciousness and the cosmic consciousness. The latter position can be considered a type of *panentheism*. Panentheism typically asserts that God “contains” the world but exceeds the world or that the world exists “in” God but does not exhaust God (see Main, Chapter 4 in this volume). For pantheists, identification of God and the world is total; for panentheists, identification is partial because there is more to God than the world. Thoroughly pluralistic metaphysics tends to favor panentheism more than pantheism because the plurality of beings points to something transcendent to them, a common source or ground.

If pantheism and panentheism take on board evolutionary and developmental ideas, then the idea of “God in process” emerges. For if God or part of God is the universe, then the evolution of the universe and its participants, including the development of new kinds of bodies and of more advanced minds and societies, will also be the evolution of God. Gone is the immutable God of classical theism: God is now a developing God, growing through its localized manifestations in the world. So while the consciousness of the cosmos may initially be rudimentary, evolution works to develop it and bring it to maturity. Panentheism of the evolutionary kind had a significant presence in *BP*, in Edward Kelly’s (2015b) synoptic chapter, and in Michael Murphy’s (2015) historical overview of evolutionary panentheism and his vision of the future development of humanity. In this volume, Kelly briefly returns to panentheism in the epilogue, and it has a significant presence in Roderick Main’s chapter, emerging there as Jung’s “implicit metaphysics.”

Seeking to place introvertive mystical experience in Jung's theorizing, Main is drawn to explore the relationship between the ego and the Jungian *self*, a center around which the conscious ego and the unconscious psyche and its archetypes can become integrated in an unconscious drive toward wholeness. The ego is neither a mere bystander in the process nor a hindrance to be discarded, for it is only through the ego that the light of consciousness can be extended into the unconscious. As conscious wholeness or "individuation" comes to be realized, the psychic center shifts from ego to self. Panentheism enters the picture here, for parallels can be drawn between Jung's treatment of the ego-self relationship and panentheism's concept of the world-God relationship. Just as the ego contributes developmentally to the self, bringing consciousness to the unconscious, so the world as a part of God plays a role in the development of God. Main points out that Jung depicts God "as not separate from the world, as affected by the world, and as more than the world," which fits well with the definition of panentheism. But Jung's parallel understandings of the ego-self and world-God relationships do not remain separate: they come together because the self, in Jung's view, is the "God-image." If the self is the God-image, then by making the self conscious, the ego also brings God's immanence to consciousness. Thus, human ego-consciousness, for all its limitations, has a truly meaningful role: it brings about "conscious realization" of the self and therefore of divine immanence. Main conjectures that Jung's implicit panentheism, which values the world and the present life, explains why introvertive experiences of pure consciousness, although locatable in Jung's thought and experience, are not central to it.

Panentheism and alternative concepts of God are not explicitly raised by the authors in Part II other than Main. This does not mean, however, that they neglect to discuss what they consider fundamental reality or raise developmental and evolutionary issues. For example, Max Velmans describes a transcendent aspect of cosmic being, a creative, intelligent "ground of being" with primordial consciousness and energy aspects, and he discusses the dual-aspect coevolution of consciousness and material forms. Bernardo Kastrup has a low-grade universal consciousness in which dissociated alters emerge and to which they perhaps contribute, raising the self-consciousness of universal consciousness. Federico Faggin has his One, the totality of what potentially and actually exists, drawn by love, desire, and curiosity to manifest a universe of consciousness units in the service of self-experience and self-knowledge.

In such developmental visions, the background presence of Hegel and other thinkers who anticipated or expressed a process concept of God can be discerned. But as Magee explains in his chapter, Hegel's account of the progress of consciousness did not take on board biological evolutionism. By con-

trast, evolutionism has a place in Magee's neo-Hegelian speculations: there is an evolution of parts, including biological forms, toward greater wholeness/individuality and order, and a corresponding evolution of the whole since evolution of the parts contributes to the whole. Magee explains that, although the universe is already whole and we are already one with it, evolution confers greater life and consciousness to the whole, and, through our mystical experiences, the "universe is awakening to itself." The Hegelian whole achieves self-consciousness in human beings, chiefly through their philosophical reflection, and in Magee's view through mystical flowering of consciousness too. But Magee draws back from those who think that humanity is headed inevitably toward a widespread mystical awakening. In his neo-Hegelian approach, a natural process of evolution has brought humanity to a stage of self-consciousness, but it is now up to us individually to take the next step by freeing ourselves from habitual tendencies in order to achieve a higher state of conscious awareness. As for divinity, Hegel's God is self-thinking thought, the goal of existence, a process fully realized only in human beings. Hegel's theology does not seem to be pantheism: true, God is not transcendent to the world, but neither is God identified with nature. The theology may be better viewed as panentheism: God contains the world in the sense that the world is a moment in the being of God—that is, in the process of consciousness that culminates in human self-consciousness (see Magee, 2013).

SUMMARY AND CONCLUSIONS

The metaphysical alternatives to materialism surveyed above were originally formulated to address a problem created by the corpuscular philosophy, which introduced a puzzling discontinuity between mind and matter by excluding qualitative properties from nature. Accordingly, these alternatives serve primarily as responses to the mind-body problem, a problem centered on ordinary experience and its relation to the brain. However, by making experience or consciousness fundamental in some way, they lend themselves to further application, including explanation of extraordinary experiences such as psi, synchronicity, death-related phenomena, and mystical experiences. The various alternatives can be assessed on both counts: on their application to the mind-body problem and related issues, such as the nature of space, time, matter, and perception, and their accommodation of a range of well-attested rogue phenomena. In both cases, a theory can be evaluated for its compatibility with the data and the explanatory insights it offers as well as internal consistency, explanatory range, and other theoretical virtues. Another potentially important area of application is the sciences, especially

physics: if a metaphysics furnishes a helpful interpretive framework for puzzling physical theories, notably quantum and relativistic theories, it will be all the more interesting and compelling. Beyond these considerations, there are less tangible but equally important ones too, such as implications for ethical, social, political, and spiritual dimensions of life. These considerations have not been central to this chapter, although alternatives that have consciousness widely distributed through nature and in a process of development will be relevant to ethical and environmental issues, and recognition of advanced kinds of consciousness will have a bearing on spiritual matters, as intimated in the previous section, including the nature of self, ultimate reality, and their relation (Marshall, 2019).

Panpsychism tells us that consciousness is irreducible and widely distributed throughout nature and that even the universe as a whole may be a conscious entity. It asks us to consider the “inner” experiential nature of things, not just their outward appearances and behaviors. However, panpsychism and its cosmopsychist variant are incomplete as mind–body philosophies because they do not themselves explain the relation between mind and matter. Nevertheless, they can be incorporated into more comprehensive approaches, and they may shed light on some rogue phenomena, including psychokinesis, cosmic consciousness, and mystical intuitions of centers of consciousness in the natural world. Panpsychism should not be rejected just because the constitutive variety faces the combination problem, for there are nonconstitutive types of panpsychism that are not so troubled. If a fully adequate mind–body metaphysics is finally achieved, then panpsychism could well have an important place in it, for such a theory will likely understand consciousness to be a fundamental reality and therefore far more pervasive than is generally acknowledged at present. Panpsychism, then, is likely to be part of the story, and it can also be appreciated for its ethical implications if it encourages empathetic and respectful attitudes toward nature and fellow beings.

Interactionist dualism arose to safeguard the human soul in the face of encroaching mechanization of nature. By keeping mind and matter radically distinct, the former could be protected from reduction to the latter. Dualism has been used to explain psi phenomena by extending the arena of mind–matter interaction beyond the brain into the world at large, and its plurality of matter-independent souls can support postmortem survival, including personal survival, for which there is considerable evidence. It even meshes well with one important but minority interpretation of quantum physics that gives consciousness a role in the collapse of the wave function. However, dualism takes over the problematic treatment of quantitative and qualitative properties from corpuscular philosophy and is therefore troubled by the interaction problem. Dualists can try to alleviate the problem by making mind and matter

more alike and therefore capable of interaction, notably by admitting extensional properties into the “mind” category. However, if mind and matter are made more alike, dualism is on the path to becoming a monism. Moreover, not all rogue phenomena are satisfactorily addressed by dualism: it stumbles badly over mystical experiences of the natural world, for these, if truly revelatory of reality, testify to a profound unity between self and nature, a non-duality of subject and object. My overall sense, then, is that dualism, while admirable in some ways, does not measure up.

Dual-aspect monism rejects ontological dualism and replaces it with a less severe, epistemological dualism. The mental and physical are now dual epistemic aspects of one substance, which is therefore both mental and physical—or neither if the one substance is taken to be psychophysically neutral. Dual-aspect monism supports panpsychism and cosmopsychism, which is advantageous for the explanation of some rogue phenomena. If the world has an advanced mental aspect, the special cognitions of psi, the elaborate orchestrations suggested by some synchronicities, and the consciousness expansions of some mystical states become more understandable. But dual-aspect monism is not inherently supportive of postmortem survival, for decomposition of the physical brain aspect will be accompanied by decomposition of the mind aspect, and the only kind of “survival” available will likely be reversion to the cosmic-mind aspect. Thus, if the evidence for personal survival is considered strong, then dual-aspect monism will not be an attractive option. It may, however, be possible to develop pluralistic varieties of dual-aspect monism that are more supportive of personal survival. The trouble with dual-aspect monism lies not so much in its application to the rogue phenomena as in its philosophical approach, in its treatment of the mental and physical as coequal, concomitant, and mutually irreducible. This is surely to miss the point that first-person and third-person perspectives—the “what’s it like to *be* a bat” and the “what’s it like to *see* a bat”—are both experiential and involve extensional properties. Dual-aspect monists have not sufficiently questioned the concept of “physical.” The experiential and physical aspects are not equal, the latter reducing to structures and processes *within* experience, as classic neutral monists recognize and idealists can insist too. These theorists do not take matter as a given, as materialists, dualists, and dual-aspect theorists do, and are therefore obliged to explore what matter might really be.

However, classic neutral monism, as represented by James and Russell, is arguably not neutral since its basic stuff is experience, percepts, and the like, and all the better for it because a psychophysically neutral basis would exacerbate rather than ease the hard problem. These classic neutral monisms might be considered idealisms with low-grade, undeveloped experience as their basic “stuff,” although James and Russell denied this because they

excluded sensory-type experience from the mental category, a move that allowed them to distinguish their positions from the absolute idealism they were intent on criticizing. Since neutral monism does not take advanced mentality to be basic, it has difficulty explaining advanced mental functioning in rogue phenomena, such as psi cognitions and mystical experiences. Nor is it strongly supportive of personal survival because it places the experiencing subject as contents within the field of experience, contents that are susceptible to decomposition into the neutral elements. There may be some limited persistence of memories and the like but no strong support for continuation of identity, and again the only kind of “survival” envisaged may be reversion to a cosmic experiential field. Neutral monism is, however, applicable to the unity of subject and object in those mystical experiences that bring a sense of immersion in the environment, although it is not well suited to explaining cosmic expansions of consciousness, given their advanced noetic quality, or theistic mystical experiences that bring a sense of divine personhood. Neutral monism may have application to mystical experiences of a supreme “nothing” beyond positive description, but whether this foundational level of reality is adequately characterized as “neutral” is open to debate. It may be better characterized as a kind of consciousness.

There may, then, be good reason to settle on an idealist metaphysics that recognizes consciousness as fundamental and has a place for advanced mind, either as an original endowment or as an evolutionary development to which humans contribute, if only in a small way, along with other beings. Such idealisms should try to give a satisfactory account of matter; otherwise, they will be susceptible to the “inverse hard problem” raised by Velmans. But the challenge can be welcomed as an opportunity rather than a problem, an opportunity to come to grips with the nature of matter rather than simply take it as a given, as most other approaches do. Idealism stands a chance of giving a reasonable account of matter if it can avoid the mistake of excluding quantitative properties from its experiential universe: matter then corresponds to certain measurable structures and transformations within an extended field of experience, a field far more extensive than our familiar, sense-mediated experiences. A phenomenism that is content to stay with the sensory surfaces of things does not go very far, leaving much unexplained, including the nature of matter. Instead, the idealist can posit a universe of experiential contents, full of dynamically transforming structures that physical and biological sciences study, a universe understood either in monistic fashion as a single experiential whole or in pluralistic fashion as many such experiential wholes. I am drawn toward the latter approach partly because it seems to be in better agreement with the insights of relativistic physics, with its frame-dependent distance and time measurements, which are the basis of other physical properties, as I have noted above. It also better fits the evidence of cosmic mystical

experiences, which suggest that there is not just one cosmic subject and its experiences, as cosmopsychists have tended to assume, but many cosmic subjects with their own cosmic experiences. According to this line of thought, each of us is one of these cosmic subjects at a deeper level of self—hence the potential accessibility of these experiences to us.

At the end of this trek through a landscape of mind–matter metaphysics, the reader may be unsure which path to follow. I have mapped out the territory in broad brushstrokes rather than fine-grained analyses of individual positions, theories that might reveal unexpected strengths and weaknesses when examined more closely. None has emerged as completely unproblematic, although I do express a preference for idealism, specifically a pluralistic, monadological type, but others may find that approach too exotic for their tastes. One prediction, however, can be made with confidence: as materialism fades from view, as surely it must, the animated debates to come will take place not between physicalists and their opponents but between representatives of the various alternatives. Dualisms, dual-aspect monisms, neutral monisms, and idealisms, in monistic and pluralistic forms, will vie with one another, just as they competed more than a hundred years ago before physicalism came to have its day in the sun.

Does this mean, then, that mind–body metaphysics is condemned to see-saw between the Giants and the Gods, between Plato’s noisy materialists and those lofty types who defend mind? Perhaps not, for the evidence now available from the careful study of accredited and wild facts may finally swing the balance in favor of the Gods. While there are no certainties here, there is at least one conviction that seems justified: consciousness is a basic feature of reality, and it will have to be recognized as such if the data, ordinary and extraordinary, are to be understood. More speculatively, consciousness may itself be evolving through the development of its partial manifestations. As summed up by Edward Kelly (2015b) toward the end of *BP* and reiterated in his epilogue to this volume, it is the conviction “that a tremendous conscious reality of some sort lies at the heart of the world, that we are intimately linked with that reality in the depths of our individual being, and that the universe as a whole is in some sense slowly waking up to itself, partly in conjunction with our conscious human choices and efforts” (p. 540). That is a vision of reality to inspire further exploration and a metaphysical compass to guide the way.

NOTES

1. Carroll (1865, p. 89).
2. As will become evident in my discussion of neutral monism below, a distinction is sometimes drawn between experience and consciousness. William James (1904)

does so when he makes experience basic and understands consciousness to be the “function” of knowing within experience. Neutral monists may suppose that there are elements of experience, protoexperiential “qualities,” that are outside awareness, lacking consciousness, requiring no subject. These have been called unsensed *sensa* or *sensibilia* and, more recently, unexperienced *qualia* (Coleman, 2014).

3. I have avoided the commonly used primary–secondary quality terminology taken over by corpuscularists Robert Boyle and John Locke from the Aristotelians, for it can be confusing. In the Aristotelian context, both primary and secondary qualities are qualitative properties of bodies: the primary qualities are hot, cold, dry, and wet, while the secondary or derivative ones include color and taste. With the corpuscularists, shape, size, and motion become the primary qualities, while secondary qualities are mere causal powers of corpuscular matter to excite qualitative properties in the beholder. Primary and secondary qualities reside exclusively in nature, while the corresponding sensations in the mind of the beholder are “ideas,” ideas of primary and secondary qualities, respectively. To complicate matters further, following George Berkeley’s idealist response to Locke, secondary quality has been used to denote the *ideas* of secondary qualities—that is, the sensations, not the corpuscular powers that cause them.

4. This is a simplified account. During its formative period, corpuscularism included a variety of opinions on the qualities. See, for example, Lüthy, Murdoch, and Newman (2001). For my first look at the quality distinction, see Marshall (1992/2006).

5. On the Basic Limiting Principles, see Braude (2002). Walach (2019) has recently discussed the equivalent idea of “background assumptions” in his Galileo Commission Report for the Scientific and Medical Network.

6. Relativistic physics has introduced a complication here because measurement of the quantitative properties becomes relative to the state of motion of the observer in a way previously unsuspected. This deeper concept of relativity has led some (myself included) to conjecture that the quantitative properties and nature in general are not mind independent.

7. In Cicero’s *On the Nature of the Gods*, from which the epigraph is taken, the idea is attributed to Zeno of Citium (ca. 334–262 BCE), the founder of Stoicism.

8. The term “cosmic consciousness” derives from the evolutionary spiritualities of R. M. Bucke and Edward Carpenter at the end of the nineteenth century. For Bucke (1901), cosmic consciousness is *not* the universe’s own consciousness in the manner of cosmopsychism (e.g., Shani, 2015), but rather a special, highly evolved human faculty through which the true nature of the universe is intuited as immaterial, spiritual, and alive. According to Bucke, the faculty of cosmic consciousness confers pantheistic insight: the universe is God, and God is the universe (see Marshall, 2005, p. 115). For Carpenter, cosmic consciousness is a nondual consciousness of cosmic reach in which one discovers one’s intrinsic unity with the world and other selves.

9. I call this the “limitation problem” because it is addressed by a “principle of limitation” or “limiting principle” that tries to account for the multiplicity of subjects and their limited perceptions (Marshall, 2015b). Comparable terms include “decombination problem” (Albahari, 2020), “decomposition problem” (Chalmers, 2016; Shani, 2015), “derivation problem” (Nagasawa & Wager, 2017), and “indi-

viduation problem” (Leidenhag, 2019). Leidenhag distinguishes several types of individuation problem, just as Chalmers (2016) had distinguished several types of combination problem.

10. Panpsychism may be relevant to another kind of paranormal experience: “multiperspectival” perception in which objects are viewed simultaneously from many directions, as reported in some accounts of near-death experiences (Jourdan, 2011; Marshall, 2019; Ring & Cooper, 1997). The simultaneous multiple perspectives could conceivably arise from access to an inclusive level of consciousness that incorporates perceptions from many centers of consciousness around the object. However, the phenomenology and genuineness of these experiences need further investigation before such an explanation can be usefully pursued.

11. On Blake’s vision at Felpham and, more broadly, his concept of “minute particulars” (including his celebrated “world in a grain of sand”), see Marshall (1992/2006, pp. 286–288).

12. The distinction may not be as straightforward as it appears since quantitative properties attended to by physics, notably extension, may be just as integral as qualitative properties to what something is.

13. Goff (2019) also raises the alternative idea that mystics intuit a deeper, nonspatiotemporal layer of physical reality from which spacetime itself emerges.

14. James (1898) explains that he frames filter theory here in dualist terms because he is countering objections to immortality that arise “in the dualist plane of thought,” but he leaves the door open for alternatives to dualism, including “absolute phenomenism” (p. 51).

15. On whether Schopenhauer was really an idealist, see Snow and Snow (1991). Schopenhauer’s two “aspects” are the nonrational will (which is fundamental) and the representational ideas of it. His metaphysics can therefore be viewed as idealist, unless idealism is defined narrowly to exclude nonrational will from the category of mind.

16. In a subsequent article, Shani is noncommittal over the metaphysics that could be used to ground the cosmopsychism, commenting that it could be “idealist” or “double-aspect” (Shani & Keppler, 2018, p. 407).

17. Grof’s characterization here is highly reminiscent of W. T. Stace’s (1960) idea of the “vacuum–plenum paradox.” How well the paradox reflects actual experiences of pure consciousness rather than the teachings of mystical philosophies is another matter, to be decided by study of the mystical data. For more on the vacuum–plenum, see Main (Chapter 4 in this volume).

18. Atmanspacher (2014) gives a detailed account of his understanding of dual-aspect/neutral monisms.

19. In his mature philosophy, Russell (1927) calls his neutral elements “events”: they are not in themselves mental or physical but are classed as such depending on what they go to make up. When they go to make up a brain, they are classed as both mental and physical while remaining neutral in themselves.

20. My thanks to Max Velmans for bringing this passage to my attention.

21. For yet another example of monism with a neutral *tertium quid* applied to a range of wild facts, see Nash’s (1976) dual-aspect theory.

22. On different senses of “nonduality,” see Loy (1998) and Marshall (2005, pp. 197–203).

23. By “color,” I mean both the achromatics—white, black, and grays—and the chromatics or hues, such as the rainbow colors. By “shape,” I mean any extension, whether line, surface, or volume, with or without distinct boundaries.

24. The lack of detailed attention to the phenomenology of mystical experiences shows in Shani’s (2015) equation of “cosmic consciousness” and “pure consciousness,” two very different kinds of experiences (Marshall, 2005), and in Goff’s suggestion, already noted, that “formless consciousness” is the intrinsic nature of the cosmos. Shani’s statement is quoted by Velmans in Chapter 5 in this volume. Albahari (2019) does make a case for the relevance of mysticism (and meditation) to metaphysics, although, like Stace (1960), she privileges introvertive experiences of ultimate unity or oneness. Mystical experiences of the natural world are relevant too, and their rich phenomenology makes them a particularly useful resource (Marshall, 2005, 2015a).

25. It would be interesting to compare Leibniz’s “world as appetite and perception” with Schopenhauer’s “world as will and representation.” In some ways, Schopenhauer acts as Leibniz’s shadow, recasting appetite as frustrated “will to live” to be overcome through asceticism and replacing Leibniz’s optimism with pessimism. For Leibniz, appetite is a God-derived power that seeks more distinct perception and knowledge—that is, the actualization of the monad’s potential and therefore its contribution to the perfection of the world. However, the outlook is not as rose-tinted as it might seem: the appetitions of confused monads are often in conflict, within a monad and between monads, working ignorantly and at cross-purposes and seeking apparent goods, not true goods. Overall, the world is harmonious, but there is much discord.

26. On monadology and synchronicity, see Jung (1952/1969, pp. 498–501).

27. If recourse to monadology seems excessive here, then a milder panpsychist approach could be taken, using such ideas as the “subsumption” proposed by Tim Bayne and David Chalmers in connection with unity of consciousness, applied to nature mystical experience by Perovich (2011).

28. Ward (1911) adopts the term “singularism” for numerical monism to avoid confusion with substance monism (p. 24), but the term has not caught on (Basile, 2009, p. 152n29).

29. On the British monadological idealists, see Thomas (2015).

30. A comparative study of the models of the psyche put forward by Jung and Myers could be most enlightening, as my coeditor Edward Kelly has impressed on me.

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EPILOGUE

Our Emerging Vision and Why It Matters

Edward F. Kelly

After we came out of the church, we stood talking for some time together of Bishop Berkeley's ingenious sophistry to prove the nonexistence of matter, and that every thing in the universe is merely ideal. I observed, that though we are satisfied his doctrine is not true, it is impossible to refute it. I never shall forget the alacrity with which Johnson answered, striking his foot with mighty force against a large stone, till he rebounded from it—"I refute it *thus*."

—Boswell, *The Life of Samuel Johnson*

The world is not to be narrowed till it will go into the understanding . . . but the understanding to be expanded and opened till it can take in the image of the world as it is in fact.

—Francis Bacon, *The New Organon and Related Writings*

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, "Haunting and the 'Psychic Ether' Hypothesis"

The development of modern science has brought with it a cornucopia of extraordinary intellectual and practical achievements, as well as a host of serious and worsening problems. Many of the problems seem connected, directly or indirectly, with a deep split that has opened up mainly in the past century or so between science and spirituality. This rupture was driven primarily by the modern ascendancy of *secular humanism*, a quasi-religious worldview anchored in late nineteenth-century physics that claims to speak for science as a whole and sees nothing in traditional faiths but vestiges of

our intellectual childhood. This “materialist” or “physicalist” worldview holds that reality consists at bottom of tiny bits of matter moving in accordance with mathematical laws under the influence of fields of force, and everything else, including our human minds and consciousness, must emerge somehow from that basic “stuff.” Our everyday understanding of ourselves as effective conscious agents equipped with free will is delusive because we are in fact nothing but extremely complicated biological machines that operate strictly in accordance with mechanical laws. Consciousness and its contents are manufactured exclusively by neurophysiological processes in the brain, and beliefs about postmortem survival—common to the world’s religious traditions—are therefore also delusive because biological death is necessarily the end; without a functioning brain, there can be no mind and consciousness, period. On a more cosmic scale, we see no sign of final causes or any sort of transcendent order. The overall scheme of nature appears utterly devoid of meaning or purpose.

Views of this bleak sort have permeated the opinion elites of all “advanced” societies and fueled the pervasive “disenchantment” of the modern world with all of its evident and pressing ills. They have also accumulated enormous cultural momentum and become essentially self-perpetuating by deliberately and systematically gaining near-total control of key structures of modern society such as our educational institutions and the media. Over the past century, our secondary schools, colleges, and universities have in effect become advocates for the prevailing physicalist worldview, which by now not only dominates mainstream scientific disciplines such as biology, neuroscience, cognitive psychology, and the social sciences but also has destructively impacted other academic specialties, including the humanities in general and—perhaps most surprisingly—religious studies in particular. It has also fostered the recent spate of scientistic attacks on traditional faiths, especially the Abrahamic faiths, which in turn has engendered pushback in the various forms of fundamentalist fanaticism we observe with depressing regularity in the daily news.

Physicalism, however, is not merely incomplete but also unsound at its very basis. The classical conception of a material universe that was introduced to physics by figures such as Newton and Laplace and developed to near perfection by the end of the nineteenth century—according to which events are unambiguously caused by prior physical events and evolve in universally shared time within a fixed and homogeneous three-dimensional spatial container—was profoundly reshaped early in the twentieth by the rise of quantum and relativity theories. Indeed, even “matter” itself as classically conceived has been shown not to exist. These seismic shifts in the foundations of physics have been easy for most of us to ignore because they are

associated with happenings on scales so much smaller or larger or faster moving than our own, but they have also eroded the foundations of the prevailing physicalist worldview as described above. That worldview, I emphasize, is not itself science but metaphysics, a *philosophical* position that is in fact no longer consistent with our deepest physical science.

In addition, physicalist brain–mind theory is now foundering at a fundamental level. We have no understanding whatsoever of how consciousness could be produced by physical events in brains, and recent theoretical work in philosophy of mind has convinced many that we can never achieve one. Meanwhile, large amounts of credible empirical evidence have accumulated for a variety of human mental and psychophysical capacities that strongly resist or utterly defy explanation in physicalist terms. Most impressive to me among these “rogue” phenomena are paranormal, psychic, or “psi” processes of the various familiar kinds; extreme forms of psychophysical influence, such as highly localized and specific placebo effects, stigmata, and hypnotically induced blisters of pre-specified shape; the occurrence of multiple and overlapping centers of consciousness associated with single physical organisms, particularly in cases in which a normally hidden or subliminal personality is conspicuously more gifted and knowledgeable (or suffers different allergies or requires different eyeglass prescriptions) than the everyday personality itself; powerful near-death experiences occurring under extreme physiological conditions, such as deep general anesthesia and/or cardiac arrest, in which no experience whatsoever should be possible according to mainstream neuroscience; genius-level creativity on the scale of persons such as the extraordinary Indian mathematician Ramanujan; and profound, personally transformative mystical experiences, whether spontaneous, the result of intense meditative practices, induced by psychedelics, or precipitated during a close brush with death. There is even direct evidence of multiple kinds for postmortem survival of human mind and personality, coupled with increasing recognition that the only credible explanations for this evidence involve either postmortem survival itself or unusually complex psi processes involving only living persons—a dilemma both horns of which are fatal to the physicalist worldview.

Physicalism is too impoverished to carry this heavy empirical burden, but what should take its place? Serious attempts to imagine how we and the world must *really* be constituted, in order that rogue phenomena of the indicated sorts can happen, lead inexorably into metaphysical territory partially shared with the world’s religious traditions—specifically, in my opinion, toward some form of evolutionary panentheism, which I take as a theologically oriented member of the broader class of idealist metaphysical positions. Worldviews of this type rest on just three core principles: first, that the manifest

world arises from and is constituted by a tremendous world-transcending ultimate reality of some conscious sort; second, that we humans are intimately linked with that ultimate reality in the depths of our individual psyches and can experience it directly in a variety of ways; and, third, that this universal consciousness or universal self that is the source of the manifest world is in some sense slowly waking to itself—aided in part by our conscious human choices—as evolution of more complex biological forms enables fuller expression of its inherent capacities.

What I see emerging, in short, is a middle way between the warring fundamentalisms—religious *and* scientific—that have dominated contemporary public discourse: specifically, an expanded science-based understanding of nature that can accommodate empirical realities of spiritual sorts while also rejecting rationally untenable “overbeliefs” of the sorts routinely targeted by superficial critics of institutional religions. This emerging vision seems to me both scientifically defensible and spiritually satisfying, combining the best aspects of our scientific and religious heritage in an intellectually responsible effort to reconcile these two greatest forces in human history. In particular, it can provide sustenance to persons who view themselves as “spiritual but not religious” and to those who remain anchored in a traditional faith but are troubled by conflicts between elements of religious doctrine and findings of modern science. At the same time, and like traditional faiths, it makes room for the possibility of postmortem survival and can therefore provide comfort to persons who are facing the reality of death, whether for themselves or for loved ones such as aging parents. It can also help the large numbers of persons who have encountered powerful mystical-type experiences to make sense of their experiences and utilize them productively in service of positive self-transformation.

The emerging vision sketched here in barest outline provides an antidote to the prevailing postmodern disenchantment of the world and demeaning of human possibilities. It not only more accurately and fully reflects our human condition but also engenders hope and encourages ego-surpassing forms of human flourishing. It offers reasons for us to believe that freedom is real, that our conscious choices matter, and that we have barely scratched the surface of our latent human potentials. It likewise addresses the urgent need for a greater sense of worldwide community and interdependence—a sustainable ethos—by showing that under the surface we and the world are much more deeply and widely interconnected than previously realized.

Our individual and collective human fates in these dangerous and difficult times—indeed, the fate of our precious planet and all of its passengers—may ultimately hinge on wider recognition and more effective utilization of the expanded states of being that are potentially available to

us but largely ignored or even actively suppressed by our struggling post-modern civilization with its warring tendencies toward self-aggrandizing individualism and fundamentalist tribalism.

Availability of an improved worldview does not guarantee its acceptance, of course, and even widespread acceptance would not guarantee that its potential benefits will be fully realized or its potential abuses adequately controlled. But a conception of the natural world much richer than the prevailing physicalism—one that is greatly superior in human terms and at the same time *more* consistent with leading-edge science—is now definitely within reach.

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Paul Marshall is an independent researcher with interests in mysticism, religion, philosophy, science, and their interactions. He studied natural sciences at the University of Cambridge and received his MA and PhD in religious studies from Lancaster University. His books include *Mystical Encounters With the Natural World: Experiences and Explanations* (2005) and *The Shape of the Soul: What Mystical Experience Tells Us About Ourselves and Reality* (2019). With Edward F. Kelly and Adam Crabtree, he coedited *Beyond Physicalism* (2015). Details of his publications can be found at <https://mystical-encounters.com>.

Michael Murphy is cofounder and chairman emeritus of Esalen Institute and now serves as director of its Center for Theory and Research. He is the author of four novels and several nonfiction works: *In the Zone* (1995), an anthology of extraordinary sports experiences, coauthored with Rhea White; *The Life We Are Given* (1995), a book about transformative practice, coauthored with George Leonard; *The Physical and Psychological Effects of Meditation* (1988), coauthored with Steve Donovan; *God and the Evolving Universe* (2002), coauthored with James Redfield and Sylvia Timbers; and *The Future of the Body* (1992), a large-scale study of human capacities for transformation. In the 1980s, he helped organize Esalen's pioneering Soviet-American Exchange Program, which became a premier vehicle for citizen-to-citizen relations between Russians and Americans, and in recent years he has helped

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of *Previous Lives* (2005) and *Return to Life: Extraordinary Cases of Children Who Remember Past Lives* (2013), a *New York Times* best seller.

Max Velmans is emeritus professor of psychology, Goldsmiths, University of London, and has been involved in consciousness studies for more than forty years. His main research focus is on integrating work on the philosophy, cognitive psychology, and neuropsychology of consciousness. He has more than 130 publications on this topic, including his major work *Understanding Consciousness* (2000) (now in its second 2009 edition), the coedited *Blackwell Companion to Consciousness* (2007) (now in its second 2017 edition), *Towards a Deeper Understanding of Consciousness* (2017), and the recently published four-volume collection of major works on consciousness in *Consciousness: Critical Concepts in Psychology* (2018). He was a cofounder and, from 2004 to 2006, chair of the Consciousness and Experiential Psychology Section of the British Psychological Society, as well as an Indian Council of Philosophical Research National Visiting Professor from 2010 to 2011.