10. Science and Spirit in Communion

The tenth essay in **The Ultimate Journey** examines the importance of science and spiritual wisdom working in harmony. At the end are a number of recommended books on this topic.

Science and the Ultimate Journey are not in conflict. Further, science is not in conflict with any of the spiritual or religious traditions of human history. To better understand the importance of science and spiritual wisdom working in harmony, it is necessary to focus on what science is, and what it is not.

What Science Is

Science is a method for understanding the physical world—how it functions as well as how we can use it to better our lives. Science and technology have been crucial components in the development of much that is central to modern life: agriculture, clean water, life-saving medicines, medical instruments, paper, the printing press, trains, boats, airplanes, automobiles, cities, sewage systems, radio, TV, computers, cell phones, the internet, and the ubiquitous use of electricity.

In doing its work, science has occasionally shown that a specific theory about the physical world held by a specific religious group was incorrect. Often these religious ideas were based on established science of an earlier period, then becoming part of the religion's ideology. But because the business of science is to investigate established theories and propose better ones, it is constantly challenging accepted views, even those embraced by a religious community. This can be confusing for the religious-minded who are searching for eternal verities, but the nature of science is to be in flux.

The conclusions to be taken from this are **not** that science and spirit are in conflict, but rather: 1) those interested in religious issues should accept science as it changes concerning how *the physical world functions*; 2) in the area of religious beliefs, however, it is not wise to look to science for confirmation because science only deals with the physical world, and spiritual truths cannot be found or confirmed there.

Of course, the resistance to new scientific ideas does not come only from religious communities—established scientists also resist, sometimes vehemently. As the great physicist Max Planck cryptically declared, "Science advances one funeral at a time."[1] AS he put it: "A new scientific truth does not triumph by convincing its opponents and making them see the light, but rather because its opponents die, and a new generation grows up that is familiar with it."[2]

This is not an absolute, of course, but there are many examples of his point, such as Galileo being strenuously opposed by the scientists of his day, just as they had rejected the solar-centric views of Copernicus and Kepler. Most of the scientific contemporaries of these three giants never accepted the new idea. But the opponents gradually died away, and the new vision of the solar system became the mainstream position. In a similar vein, Gregor Mendel's groundbreaking work on genetic inheritance was strenuously opposed by the best scientists of his generation.

An even more distressing example concerns the medical community's rejection of the idea that germs spread disease. The sad history is that in 1846 a young Hungarian doctor, Ignaz Semmelweis, began to suspect that doctors were themselves spreading illness, and he suggested they wash their hands between patients. He implemented this practice in his hospital, and it worked beautifully. But most doctors throughout Europe were outraged by his suggestion, and when he tried to convince them, he was greeted with a firestorm of derision.

They ignored him, even shunned him, and he lost his job because he persisted in trying to persuade them. A bit later, in the mid-1850s, Louis Pasteur took up the cause, arguing that germs spread diseases. He too was met with violent resistance from much of the medical community, even though by 1877 he had collected clear evidence. It took decades before many medical personnel put this new theory into practice. Many people died as a result of the resistance.

And, although we like to think otherwise, we moderns are still the same human beings, and researchers and scientists are still subject to the tendency to deny new ideas. For instance, a little over thirty years ago a young Australian physician suggested that bacteria were a primary cause of ulcers. He was met with derision at a medical conference at which he presented his evidence. It took a number of years before his ideas were accepted, although his evidence was clear-cut. To move to the immediate present, since early 2020 the Covid epidemic has demonstrated how fear and false information can affect many peoples' views in dangerous ways, including researchers and scientists.

Considering these examples, it is easier to understand William James' insight concerning what actually happens when someone claims that a theory has been objectively validated. James pointed out that the "conviction that the evidence"[3] proves a theory is never an objective decision, for belief in any theory can never be objectively verified. Why? Because each person must decide how much evidence is sufficient, and this is always a subjective opinion by each person. In other words, there is no objective evidence to indicate when enough evidence has accumulated to prove anything. In the end, each person has to make a subjective decision about how much evidence is enough, and this decision can never be made objectively.

This is exactly the reason there are constant clashes within the scientific world, and it is the reason science can never provide any final "truth." Nonetheless, science is the best guide we have for understanding and managing the physical world. The mainstream scientific view provides the "best guess" we have at the current moment about how the physical world works. Yet there are always outliers and sceptics about every theory—those who do not believe the evidence is sufficient and who are looking for a better approach. This is exactly why science works. For me, this means that, at any given moment, it is wise to organize around the mainstream scientific view—unless I have strong reasons to think otherwise. Then, it is wise to explore the views of the outliers and skeptics to see what they have to offer.

What Science Is Not

Because of how it functions, science is not a sound basis upon which to formulate a worldview or make an act of faith. Quite different from science, materialism is a faith system that does both. Science is always changing, rejecting old theories, finding new ones. Thus, to make it the basis for one's values and meanings, or those of a society's, is to distort its purpose. Values and meanings are not science's function, and to ask it to do things for which it is not equipped is to do it a great disservice. Values and meanings are the domain of the spiritual, religious, and philosophical. This is the reason science is never in conflict with core spiritual, religious, or philosophical ideas—because it deals with a completely different realm, explores and maps a different territory.

Unlike most scientists, those making a materialistic act of faith are often in conflict with the views of other faith systems. Very few scientists through history were materialists; in fact, science has mostly been carried forward through the centuries by people who had religious and spiritual beliefs. For example, Isaac Newton is often considered the greatest scientist of all time, but he had a consuming interest in religious and spiritual questions and spent more time studying and writing about those topics than he did about science. Importantly, this did not interfere with his scientific achievements. Perhaps it enhanced them.

As said before, science and historical research occasionally demonstrate that a specific idea about the physical world held by a religious group is incorrect. This is entirely different, however, from being in conflict with foundational religious and spiritual beliefs. Science has no way of knowing whether anything exists beyond the material realm and has no tools for investigating this terrain. Importantly, this is the territory the wisdom traditions have been exploring since their inception, and this is where we must look for values and meanings, and for guidance for life and living,

The distinction is not trivial; it deeply concerns you and your life. When you need guidance on your most crucial decisions, science has little to offer. For instance, it can't be of much help with: 1) the sacrifices you will choose to make for those you love; 2) whether you will engage in artistic and creative endeavors, which ones, and how much time to spend; 3) whether you will join the millions of others who are spending countless hours helping those in need, and if you do, when and how you will go about it; 4) how much time you will commit to being in nature, and if you do so, when and where; 5) the value you will gain by experiencing art, poetry, music, adventure, and various forms of entertainment, and how much time to give each.

In a different vein, science has little guidance for you about how to relate to honor, courage, love, honesty, responsibility, justice, duty, kindness, truthfulness, forgiveness, gratitude, or any of the other values and virtues that have occupied so much time and attention in human history.

For myself, I have come to understand that science cannot help much when I am wrestling with what my life is about, how I should spend my time, or how I should live. This is the territory the great spiritual teachers have provided guidance about, and the wisdom traditions have helped us understand through the centuries. We live in a physical world, but values and meanings cannot be derived there, thus Science and Spirit must be brought harmoniously together if we are to have healthy societies, and if you are to have a complete and fulfilling life.

Science for wisdom versus science for manipulation

In his short book, *Guide for the Perplexed*, economist and best-selling author E. F. Schumacher discussed the value of "science for wisdom," which he viewed as the deep motivation for all of science since its inception. He observed, however, that during the scientific revolution a number of scientists began focusing solely on finding the best way to use the material world for pleasure, comfort, and convenience. He called this "science for manipulation."[4]

Science for wisdom is about the desire to know at the most profound level, the urge to understand the mystery at the heart of existence that sometimes fills us with awe and wonder. As a part of this search for truth in the broadest sense, science began as a branch of philosophy. In fact, it was called natural philosophy until well into the 19th century—it was simply the area of philosophy that studied nature.

Then, no one believed science could understand everything; many important questions were in the domain of the other branches of philosophy. In this same vein, one of the greatest philosophers of the 20th century, Ludwig Wittgenstein, said: "Even when all possible scientific questions have been answered, the problems of life remain untouched."[5] Reinforcing this wisdom, the greatest scientist of the 20th century, Albert

Einstein, is quoted as saying: "I believe in intuition and inspiration. Imagination is more important than knowledge."[6]

There is absolutely nothing wrong with focusing on the material world and trying to find ways to manipulate it for our use—as long as we respect the overall health of the natural world and understand that focusing on the material realm alone cannot answer the broader questions of life, or help us make good decisions about many important things. Consider that, in addition to all the blessings science has bestowed, science and technology have given us guns, bombs, pollution, poisons, methods of torture, tools for brainwashing, chemical weapons, enough nuclear bombs to destroy the planet many times over, and tools for spying on, indoctrinating, and manipulating masses of people. As they developed these things, scientists focused on manipulating and controlling the material world provided no guidance whatsoever on how to decide between good uses and bad. Are guns good or bad? It depends on how they are used and when, but science has nothing to say about this. Is the internet and social media good or bad? Both good and bad, and everything in between, but science offers no guidance as to how to maximize the good and limit the bad.

For instance, science and technology built the weapons with which Hitler conquered Europe and carried out the Holocaust, offering no restraint to his actions. Science and technology made possible the destruction of the World Trade Towers on 9/11, and they have delivered chemical and biological weapons to bloodthirsty rulers with no limit to their use. The bombs science and technology developed have killed millions of innocent civilians, including far more children than most of us are willing to let into consciousness because we wish to avoid the horror we feel when we do. In short, science and technology are willing to serve terrorists and tyrants as fully as the "better angels of our nature."

This is only the beginning of the problems created when science within a materialistic worldview is looked to for making societal decisions. Since World War II, the ascendency of science for manipulation has brought a majority of people in the United States many useful products—perhaps more material goods per person than has ever been true in human history. But this flood of material things has not brought most of us deep happiness, fulfillment, or meaning. Rather, there has been an increase in the percentage of people with greater anxiety, depression, alienation, loneliness, addictions, and free-floating anger bursting forth as road-rage, shootings, violent protests, and online attacks and shaming. Drugs, both legal and illegal, are being used more and more widely as band-aids for our problems, yet the problems are not being reduced.

As a society, we seem to be breaking down into smaller and smaller identity groups with increasing conflicts between us—rather than coming together to solve our

problems. This weakening of social cohesion has been a major theme among artists for decades, with dark and chaotic images in paintings, sculpture, movies, novels, computer games, science fiction, and comic books. Our artists are making clear that we face great danger, both as individuals and as a society, because life is becoming increasingly meaningless and empty for so many.

If those are not dire examples enough, consider that many scientists today believe that our greatest danger as a species lies in the cumulative effects of the poisoning of the Earth's water, the pollution of the air (making it increasingly toxic), and the rise in temperature of the Earth that is causing irreversible climate change. Already we are witnessing oceans growing relentlessly higher to the point of endangering large cities; deserts consuming large areas of land that used to be habitable; rainforests and other vegetation with which we humans have a crucial symbiotic relationship being devastated, and the vast destruction of productive soil all over the planet. Science and technology created the tools with which these things are being done, while providing no restraint on their use or guidance for how to focus them in healthy ways. Clearly, a narrow science focused solely on power and profit cannot be left to its own devices to decide how its discoveries will be applied.

To begin solving our accumulating problems and create a more viable future, we must turn toward the wisdom carried through the centuries by the wisdom traditions, and to science for wisdom with its roots in philosophic and spiritual soil. Science and Spirit working together are our best hope. The first step is to deal with values, virtues, priorities, and meanings. Then, within the framework of some agreement about how we will live together, focused science can be of great value in solving specific problems. But value judgments and societal priorities must be made by other means besides a science focused on the material world alone. We must recover science for wisdom and find a way for Science and Spirit to work together if we are to have healthy communities and cultures.

Yet, whatever happens in our society, each of us in our own lives has the opportunity to access and incorporate the wisdom passed down through the centuries by the wisest who have lived among us. Many of them lived in troubled times, but still found peace and fulfillment. Outer circumstances are not a determining factor in whether you will find meaning and fulfillment—or have a well-lived life.

Science and Spirit in communion

One of the greatest physicists of all time, Niels Bohr, said: "We must be clear that when it comes to atoms, language can only be used as poetry. The poet, too [like the physicist], is not nearly so concerned with describing facts as with creating images."[7]

In most cultures in the past, philosophy, science, spiritual explorations, and religious ideas did not exist in separate boxes. All relied on poetic imagery. Science and Spirit lived peacefully together, and that should be our goal today. When the scientific revolution began its modern journey in the 16th and 17th centuries, all the key scientific figures had a deep interest in spiritual questions. Most scientists have always known that cooperation between Science and Spirit is essential.

In *The Eye of the Spirit* Ken Wilber points out that all the physicists who developed relativity and quantum theory—the crown jewels of twentieth century science—came to an essentially mystical view of reality. "Individuals such as Albert Einstein, Werner Heisenberg, Erwin Schrödinger, Louis de Broglie, Max Planck, Wolfgang Pauli, Sir Arthur Eddington—the vast majority of them were idealists or transcendentalists of one variety or another."[8]

These physicists and many great scientists before them adopted a transcendental view because they understood that scientific discoveries will never answer the ultimate questions we face as we go through life. They recognized that the nature of the universe is such that more is required than what scientific experiments and mathematical formulas can provide. The great British astrophysicist Arthur Eddington put it this way: "We have learnt that the exploration of the external world by the methods of physical science leads not to a concrete reality but to a shadow world of symbols, beneath which those methods [the methods of physics] are unadapted for penetrating."[9]

In the early 20th century there arose the hope that physics, with its incredible success in explaining many things, would eventually explain everything. But that has not been the case. Rather, the deeper physics has gone in exploring the material world, the more it has found that some things, such as consciousness and the nature of matter itself, escape its grasp.

This makes clear why science must work with the other members of its family tree—philosophy, religion, and spirituality—if it is to successfully approach the most important questions about life and living. These other branches of human wisdom have focused for millennia on exploring the issues which science has no tools to explore. Science can only make contributions to the broader questions we are dealing with if it embraces its role as one branch on the tree of wisdom, recognizing that it is not the whole tree. Broader wisdom requires integration and mutual respect between all branches of the tree. All must play their part if we are to live into our full potential as human beings.

Scientists and scholars on a broader perspective

Below are some of my favorite books by scientists and scholars who have been open to new ideas or proposed interesting theories providing new understandings.

1. Well-known scientists with open minds and hearts

Where Is Science Going? by Max Planck: Also see his book *The Universe in The Light of Modern Physics*: Planck wrote: "As a man who has devoted his whole life to the most clear-headed science, to the study of matter, I can tell you as a result of my research about atoms this much: All matter originates and exists only by virtue of a force which brings the particle of an atom to vibration and holds this most minute solar system of the atom together. We must assume behind this force the existence of a conscious and intelligent mind. This mind is the matrix of all matter."[10] These words convey better than I ever could the direction of his thinking.

Science and the Modern World by Alfred North Whitehead: Whitehead was one of the greatest mathematicians of the 20th century and developed the idea that the fundamental order of the universe is an interactive process, rather than material matter. His "process theology" has had an impact on many modern thinkers.

Physics and Beyond: Encounters and Conversations by Werner Heisenberg: Heisenberg was deeply interested in broader ways of knowing as well as eastern philosophy. After conversations with poet and spiritual teacher Rabindranath Tagore about Indian philosophy, Heisenberg said: "Some of the ideas that seemed so crazy [in physics] suddenly made much more sense."[11]

Wholeness and the Implicate Order by David Bohm: A noted physicist and colleague of Einstein, Bohm proposed that there are two orders of reality—the physical world we see, and the "implicate order" that is invisible to our senses but profoundly effects everything. He also suggested that a good way to understand the world is as a hologram.

Ideas and Opinions by Albert Einstein: Although not especially religious or spiritual, Einstein nonetheless said his spiritual views were like those of the philosopher Spinoza, who believed that God is imminent in all things. Many of Einstein's sayings in this book actually sound quite spiritual.

Nobel Prize Conversations: With Sir John Eccles, Roger Sperry, Ilya Prigogine, Brian Josephson by Norman Cousins: All of these acclaimed Nobel-prize winning scientists rejected materialism and had theories about the world that were open to broader explanations. Cousins was the long-time editor of the prestigious *Saturday Review of Literature*. In this book he explores the alternative views of the scientists in a way that is open to the non-specialist.

Margins of Reality: The Role of Consciousness in the Physical World by Robert Jahn: The head of the engineering department at Princeton for many years, Jahn and

his colleagues collected extensive evidence that thoughts can affect the physical world at a distance.

The Structure of Scientific Revolutions by Thomas S. Kuhn: Kuhn was a professor at the University of California at Berkeley whose fields of study were physics and the philosophy of science. This book dramatically affected the way many people think about changes in science, making clear that fundamental shifts are based on the emergence of a new paradigm. Crucially, every paradigm has gaps and flaws, so none captures the whole truth—which is almost certainly true of our own.

The Emperor's New Mind by Sir Roger Penrose: An acclaimed mathematical physicist, mathematician, philosopher of science, and Nobel Laureate in Physics, Penrose dealt extensively with the connection between fundamental physics and consciousness. In this book he makes clear that the known laws of physics are inadequate to explain consciousness, and thus the working assumption must be that consciousness does not lie solely in the brain.

Forces and Fields: The Concept of Action at a Distance in the History of Physics by Mary B. Hesse: A noted philosopher of science and professor at the University of Cambridge, Hesse focuses on the question, "How do bodies act on one another across space?"[12]—and shows how scientists of antiquity and their broader views of reality had a great impact on modern science in dealing with this question.

The Metaphysical Foundations of Modern Science by E. A. Burtt: Burtt explores the development of the ideas of Copernicus, Kepler, Galileo, Descartes, Hobbes, Gilbert, Boyle, and Newton, discussing why they had an impact, but also highlighting the built-in limitations in their ideas that continue into modern scientific thought—leading to the conclusion that we should remain open-minded about what we know.

2. Overviews of different aspects of the relationship between Science and Spirit

Quantum Questions: Mystical Writings of the World's Great Physicists by Ken Wilber: A good summary of the spiritual views of many great scientists.

The Marriage of Sense and Soul: Integrating Science and Religion by Ken Wilber: Most of Wilber's books deal with this topic, but this one does so very directly.

Higher Creativity by Willis Harman: Explores how profound creative breakthroughs in every field, including science, never happen in a step-by-step way, but come as inspiration, intuition, and non-ordinary knowing. Harman was a long-time practicing scientist who became the president of the Institute of Noetic Sciences, which takes a broader approach to understanding.

Irreducible Mind: Toward a Psychology for the 21st Century by Edward F. Kelly et.al. A research professor in the Department of Psychiatry and Neurobehavioral

Sciences at the University of Virginia, Kelly and the other authors are scholars and scientists who systematically present evidence for a variety of psychological phenomena that are impossible to account for within a materialistic paradigm.

Beyond Physicalism: Toward Reconciliation of Science and Spirituality by Edward F. Kelly et.al. A follow-on book to the above that continues the project of presenting a broader view of the world and our place in it. The authors offer an enormous amount of evidence that the world has aspects beyond those materialism and physicalism assert the limits to be.

The Passion of the Western Mind by Richard Tarnas: A comprehensive exploration of the greatest minds of Western civilization and their pivotal ideas, from Plato to Hegel, Augustine to Nietzsche, Copernicus to Freud. This book makes vivid what E.F Schumacher called science for wisdom, and also that most of the great western thinkers were very open to spiritual ideas as well as to non-ordinary events.

Quantum Enigma: Physics Encounters Consciousness by Bruce Rosenblum and Fred Kuttner: In trying to explain quantum physics, the authors, respected physicists themselves, kept finding that every interpretation of quantum physics involved consciousness. Although trying to avoid metaphysical thought, they were forced to the conclusion that consciousness cannot be understood or explained within a materialistic paradigm. A good introduction to quantum ideas.

The Waning of Materialism by Robert C. Koons: Twenty-three established philosophers representing the fields of metaphysics, ontology, the philosophy of mind, and epistemology examine materialism and find it wanting. Several contributors analyze the latest versions and defenses of materialism and find no arguments that hold up philosophically.

The Holographic Universe: The Revolutionary Theory of Reality by Michael Talbot: Exploring the ideas of neuroscientist Karl Pribram and physicist David Bohm that suggest the world might best be understood as a hologram, Talbott develops a fascinating view of what the world might be, and who we are within it.

Science and the Sacred: Eternal Wisdom in a Changing World by Ravi Ravindra: Born in India but a scientist teaching in the west for many years, Ravindra brings a unique perspective to the relation between science and spirit. He explores science as a spiritual path, which many scientists through the ages have considered it to be, and notes that the best scientists have always approached science as a sacred activity.

3. New theories about how the world might work

Science and the Akashic Field: An Integral Theory of Everything by Ervin Laszlo: Laszlo is a scientist with a prestigious scientific career, teaching at several major universities in Europe and America and writing a number of books elaborating,

including a new general evolutionary theory. In a series of books including *The Whispering Pond*, *The Self-Actualizing Cosmos*, and the one listed above, he describes how science is coming to understand that everything in the universe consists of interconnected fields, and that ultimately each and every thing is connected to everything else.

Science Set Free by Rupert Sheldrake: Sheldrake was an outstanding student at Cambridge, where he received a PhD in biochemistry in the late 1960's. He began to explore the idea of morphic resonance, which posits that memory is inherent in nature, and which has much overlap with Carl Jung's ideas about a collective unconscious. This book is a very good examination of ways that science can be more exploratory and open-minded about several of the questions it has been unable to answer to date. Some other good books by Sheldrake are: *Seven Experiments That Could Change the World*, *The Sense of Being Stared At,* and *Dogs Who Know When Their Owner is Coming Home.* Sheldrake has suffered the ire of those who oppose a more open-minded attitude because his challenges to their logic and evidence have been so effective. They have even resorted to posting false information on his Wikipedia page and other venues in an attempt to undermine his effectiveness.

The Universe Story: From the Primordial Flaring Forth to the Ecozoic Era--A Celebration of the Unfolding of the Cosmos by Brian Swimme: The author's doctoral degree was in mathematics, and he is now a professor of cosmology, studying the largest possible understanding of the universe—its origins, its direction, its meaning. In this book and a number of others, as well as television specials, Swimme is attempting to unite science and the humanities in a dramatic exploration of the unfolding of the universe.

Beyond Biocentrism: Rethinking Time, Space, Consciousness, and the Illusion of Death by Robert Lanza, Bob Berman: The authors, a noted biologist and an astronomer, begin by showing how our existing model of reality is looking increasingly unsound in light of recent scientific discoveries, and they go on to propose an interesting way of thinking about our existence.

The Mind of God: The Scientific Basis for a Rational World by Paul Davies: Physicist Davies examines the way scientists such as Newton, Einstein, Stephen Hawking, and Richard Feynman have altered our conception of the physical universe, and then brings their ideas into dialogue with philosophers such as Plato, Descartes, Hume, and Kant.

The Physics of God: Unifying Quantum Physics, Consciousness, M-Theory, Heaven, Neuroscience and Transcendence by Joseph Selbie: A fascinating account of how the transcendent phenomena reported by saints, sages, and near-

death experiencers are fully compatible with scientific discoveries in the fields of relativity, quantum physics, medicine, M-theory, neuroscience, and quantum biology.

Quantum Mind and Social Science: Unifying Physical and Social Ontology by Alexander Wendt: The author suggests that our bodies are classical objects in the Newtonian sense, and thus subject to classical physics, but that our consciousness is not; that mind is a quantum mechanical phenomenon outside three-dimensional space, like a wave function, "so human awareness, agency, freedom, and consciousness are quantum mechanical in nature." We are "walking wave functions," so "mental phenomena are invisible, immaterial, and not amenable to classical ways of thinking."[13]

The Tao of Physics: An Exploration of the Parallels between Modern Physics and Eastern Mysticism by Fritjof Capra: One of the earliest books to explore the similarities between modern physics and eastern mystical thought.

Dancing Wu Li Masters: An Overview of the New Physics by Gary Zukav: Another early and widely read account of how the new physics opens the door to a much broader perspective on reality.

4. Transpersonal psychology and transpersonal studies

Initiated by William James, Carl Jung, Abraham Maslow, and Roberto Assagioli, taken up by Stan Grof, Roger Walsh, and John Welwood, and carried forward by Ken Wilber, and Michael Washburn, transpersonal psychology and transpersonal studies now include thousands of researchers and scholars. Many psychologists and other therapists use its methods in their practices. There are even a few higher education institutions today devoted to study and training in the transpersonal arena. It is a very diverse field, with only one common thread—an understanding that there is "something" beyond the individual that must be taken into account when dealing with human beings as well as with how we understand reality.

What We May Be: Techniques for Psychological and Spiritual Growth Through Psychosynthesis by Piero Ferrucci: Roberto Assagioli was an early Freudian who developed his own branch of psychology, psychosynthesis. He developed a fascinating model for how the human psyche works, which includes very broad possibilities. His work is greatly underappreciated in the U.S. today. There are many good books, but this is my favorite.

The Ego and the Dynamic Ground: A Transpersonal Theory of Human Development by Michael Washburn: Although Ken Wilber contributed greatly to the development of transpersonal thought, others pioneered a somewhat different approach. Michael Washburn is the strongest voice I know for a different way to understand this vast field.

Paths Beyond Ego: The Transpersonal Vision by Roger Walsh and Frances Vaughan: A good early look at the people and ideas who created transpersonal psychology. Walsh was professor of Psychiatry, Philosophy, and Anthropology at the University of California, Irvine, and Frances E. Vaughan was a highly respected clinical psychologist who wrote a number of valuable books about psychology, as well as about life's deeper journey.

Toward a Psychology of Awakening: Buddhism, Psychotherapy, and the Path of Personal and Spiritual Transformation by John Welwood: Welwood has used Buddhist practices for many years in his own life, and does an excellent job of incorporating his understanding of Buddhism into his transpersonal psychological ideas.

Holotropic Breathwork: A New Approach to Self-Exploration and Therapy by Stanislav Grof and Christina Grof: Grof has been one of the leading figures in this field for a long time, authoring many books. His audio program, *The Transpersonal Vision: The Healing Potential of Nonordinary States of Consciousness*, is an excellent starting point for the field. The headline book above, however, is an introduction to a method he developed to help people have a direct experience of transpersonal states.

Revisioning Transpersonal Theory: A Participatory Vision of Human Spirituality by Jorge N. Ferrer and Richard Tarnas**:** The State University of New York is the largest comprehensive system of higher education in the U.S., and a number of years ago they undertook a major project of publishing books on transpersonal and humanistic psychology by some of the leading scholars in the field. This book is the 19th published in the series and takes on the task of providing a summary of fairly recent ideas, and also provides some new thoughts about the field.

The Wiley-Blackwell Handbook of Transpersonal Psychology edited by Harris L. Friedman and Glenn Hartelius: I haven't read this book (it is actually a textbook), but it is the new standard reference work in this burgeoning field, so might be of interest to anyone who wishes to explore the field more thoroughly. It includes contributions by many different thought-leaders in transpersonal psychology and transpersonal studies.

May you find your way to the inclusion of both science and spirit in your journey.

[1] This is a paraphrase and commonly used sentence to describe his own words provided in the following quote.

[2] Max Planck, *Scientific Autobiography and Other Papers* (London, United Kingdom: Williams and Norgate Publishers, 1950), 33.

[3] William James, *The Will to Believe and Other Essays in Popular Philosophy* (New York, New York: Longmans, Green and Company, 1912), 16.

[4] Ernst Friedrich Schumacher, *A Guide for the Perplexed* (New York, New York: Harper Colophon Books, 1977), 55.

[5] Ludwig Wittgenstein, *Critical Assessments: vol. I: From the Notebooks to Philosophical Grammar: The Construction and Dismantling of the Tractatus*, ed. Stuart Shank (New York, New York: Routledge/Taylor & Francis Group, 1986), 311.

[6] Albert Einstein, *Cosmic Religion: With Other Opinions and Aphorisms* (New York, New York: Covici-Friede, Publishers, 1931), 97.

[7] Werner Heisenberg, *Physics and Beyond: Encounters and Conversations* (New York, New York: Harper & Row, 1971), 41.

[8] Ken Wilbur, *Eye of the Spirit* (Boston, Massachusetts: Shambhala Publications, 1997), 2.

[9] Arthur S. Eddington, "Swarthmore Lecture of 1929," *Science and the Unseen World* (New York, New York: Macmillan Company Publishers, 1937), 73.

[10] Max Plank, "The Nature of Matter" speech given in Florence, Italy in 1944. Also, Clifford A. Pickover, *Archimedes to Hawking: Laws of Science and the Great Minds Behind Them* (New York, New York: Oxford University Press, 2008), 417, "Max Planck's Acceptance Speech for 1918 Nobel Prize for Physics."

[11] Fritjof Capra, *Uncommon Wisdom: Conversations with Remarkable People* (New York, New York: Simon & Schuster, 1988), 43.

[12] Mary B. Hesse, *Forces and Fields: The Concept of Action at a Distance in the History of Physics* (Mineola, New York: Dover Publications, 1962), 325.

[13] Jeffrey J. Kripal, *The Flip: Epiphanies of Mind and the Future of Knowledge* (New York, New York: Bellevue Literary Press, 2019), 123.