

Foreword by Deepak Chopra, M.D.

SCIENCE, BEING, & BECOMING

THE SPIRITUAL LIVES OF SCIENTISTS



PAUL J. MILLS, Ph.D.

Special Commentary by Ken Wilber

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Science, Being, & Becoming: The Spiritual Lives of Scientists
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Tradepaper ISBN: 978-1-958921-05-0

Electronic ISBN: 978-1-958921-03-6

Library of Congress Control Number: 2022942596

Published by Light on Light Press
An imprint of Sacred Stories Publishing, Fort Lauderdale, FL

Printed in the United States of America

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INTRODUCTION

THE GALACTIC CENTER

A few years ago, I was with a group of friends discussing what was then a current astronomical event called the Galactic Alignment. This is when the earth and our Sun's positions change in relation to the center of the Milky Way Galaxy when we pass through what is called the "Galactic Plane." This event occurs every 26,000 years. It was all news to me, as other than the cycle of our own moon, I typically didn't track such things. In addition to the astronomical features of what had occurred, our conversation also included somewhat esoteric astrological aspects, and we wondered how our new position in relation to the Galactic Center might affect us here on earth, if at all.

After the conversation ended, I decided to sit and meditate on what we had been discussing. This was a contemplative kind of meditation, something I like to do to have more insight into a topic that I've just learned about. I closed my eyes with the simple intention of wanting to better understand what we had been discussing, to possibly glean some new insights. Within a moment's time, I found myself encountering a

vast consciousness, a “consciousness mind” if I may put it that way. This consciousness was utterly foreign to anything I had ever come across before. It began to communicate with me telepathically, i.e. I heard no words, but I started receiving images in my mind.

The first thing it communicated was that it had no interest in individual human beings but was keenly interested in humanity itself. I immediately thought this was odd in the sense that my study of religions indicates that beings greater than ourselves, such as the great devas and godheads, are indeed interested in helping human beings. People routinely pray to such beings for intercessions where possible and appropriate. This consciousness indicated it had been watching the development of humanity for eons and that one day in the future, humanity would come into its own in terms of fulfilling the reason it was created. It was that future event that this consciousness was interested in and waiting to occur.

As I wondered what this future event might be, the consciousness communicated to me that humanity is unique in the universe and that, after further developing our consciousness, one day, humanity will manifest something that has never before been manifested in our physical dimension. As it communicated this into my mind, I saw an image of the earth from space, and while it “spoke” there emerged spreading across the globe a vast white, goldish-colored light that will one day be produced by a more evolved collective consciousness we call humanity. It was a beautiful and inspiring sight. What is it that will one day be manifested? Acknowledging what I consider my limited capacity to fully understand the vastness of that consciousness I encountered, what I understand will be manifested into physical creation is love itself. Love, that force of and behind creation, is to come into physical existence itself.

This was a momentous experience for me. With a firmness in my mind, I thought that this was indeed a future destiny of humanity. I started

looking for books that might help me understand what I had experienced. I eventually found a few that speak about vast consciousness minds, including Jude Currivan's *The Cosmic Hologram: Information at the Center of Creation*, Carl Johan Calleman's *The Nine Waves of Creation: Quantum Physics, Holographic Evolution, and the Destiny of Humanity*, and work by the great Indian Sage Sri Aurobindo, who in *The Life Divine* describes vast levels of mind consciousness that are beyond typical human mind consciousness but of which we are destined to one day embrace. I'll share more on this later, but after reading *The Life Divine*, I wondered if the vast consciousness I encountered was what Aurobindo calls the "Overmind," or perhaps it was the "Supermind," which is a level of mind beyond the Overmind. I wondered, too, whether that transformational vision I had of the earth's future corresponded to what Aurobindo describes as the eventual "descent of the divine into the world."

I also began to ponder whether this future event is definitely going to occur—or is it a "probable," a "maybe" depending on a host of variables unknown to me. If the latter, I wondered if it is a responsibility of each of us as individual human beings to foster humanity's eventual spiritual awakening to help that eventual manifestation of love. I found myself wondering, "What have I as a biomedical scientist been doing to help or hinder this eventual development of humanity?"

More broadly, I wondered, "What are the biomedical sciences and the scientists working in them doing in terms of helping or hindering this future goal of humanity? Are we in service to humanity's future advancement or not?" I was aware that the vast majority of the scientific endeavor is highly materialistic, with metaphysical and mystical considerations outright rejected as nonexistent; love itself is considered only an emotion and even then, not routinely studied. Yet, I also knew there were biomedical scientists, including some of my own colleagues, working within the mainstream

sciences who have deeper spiritual understandings of who we are as people and of the conscious universe at large. I also knew that many of them were working in their own way to bridge the so-called “gap between science and spirituality.” They were working to overcome the materialism and its choking effects on the progress of the sciences that could ultimately help support a future spiritual life of humanity.

This is the primary reason for my writing this book. I wanted to understand what such scientists experience in terms of insights into their own spiritual nature and how those insights and experiences influence their scientific work. I thus set about reaching out to scientists and asking if I could interview them about their spiritual life. The book is a compilation of transpersonal, metaphysical, and mystical experiences and explorations of leading senior national and international scientists and clinician scientists, as well as more junior scientists who are at the beginning of their scientific careers.

TRANSCENDENTAL MEDITATION AND THE OAK TREE

My own spiritual journey, if I may call it that, started in 1972 while I was in high school when I learned to practice transcendental meditation (TM). TM was introduced to the West by Maharishi Mahesh Yogi, and back then, it was sweeping the country, much in the way mindfulness meditation has done in more recent times. I was drawn to meditation because I heard it could help me unfold my potential. I was also drawn to it for another less concrete reason: it simply seemed like a good thing to do.

I had attended an introductory lecture on TM, and the next step was to individually meet with the teacher and learn the actual meditation technique. The TM teachers lived in an old stone farmhouse just down the road from where my family lived in the small town of Pineville, in Bucks

County, Pennsylvania. In the room where I was to learn to meditate was a painting of the Maharishi's guru, Swami Brahmananda Saraswati. The Swami had been a highly significant spiritual figure in India, serving as the Shankaracharya of the Jyotir Math monastery in Northern India. After a brief ceremony, my TM instructor, Robert Wallace, gave me my personal mantra (or sound) and told me to repeat it quietly in my mind. I followed his instructions and very quickly found myself in a deeply relaxed, peaceful, and expansive place. After some time, he told me to stop repeating the mantra and open my eyes. When I opened my eyes, I looked at the painting of the Swami, and then at Robert, and asked him if the Swami had given him the mantra to give to me. He smiled and said no.

My first few months of practice, while pleasant and deeply relaxing, were otherwise uneventful. That changed one day when I went outside to meditate under a large oak tree near our home in the countryside. The tree was situated in the middle of a nearby field of wild grasses. It was midafternoon on a warm summer day. A few minutes into the meditation, my awareness suddenly shifted, and I found myself hovering above my body, looking down upon myself seated under the tree. I could clearly see the top of my head, my shoulders, and my back, as well as the ground around me, which was mostly covered in dried leaves. It was initially shocking, but I quickly settled into it.

Although it was a completely new experience for me, it at the same time felt familiar. While looking down upon my body, I found myself in an expansive sea of silence, peace, and tranquility. It was both me, Paul, having the experience and a much bigger "me," the one to whom it all felt so familiar and okay. After a few minutes, I was "back in my body." I sat there in awe; I had never heard of such a phenomenon. In the TM introductory lecture I had attended just prior to learning the actual meditation technique, my teacher Robert hadn't mentioned this as a potential experience. Rather,

the lecture focused on things like quieting the mind and experiencing relaxation.

Over the following weeks, as I pondered the experience, a seed was formed that would eventually direct me to a scientific career. I decided I wanted to learn the methodologies of science to study how meditation worked and to better understand our human potential. I particularly wanted to know about the capacity and limits of further developing our consciousness, what lies beyond the normal everyday perception of our sense of self and mindbody. Prior to that meditation under the tree, I had not known we could experience consciousness without boundaries. I also wanted to understand how is it that I was both the “Paul” I had always experienced myself to be and yet also a much bigger “me” to whom the expansive and peaceful experience was all so familiar. Who was the “real” me, or were both me? In addition to helping me understand who I was, I wondered if conducting scientific studies on meditation would help encourage others to learn it too.

STATES OF CONSCIOUSNESS

That experience under the oak tree galvanized me to become devoted to my meditation practice. I also made a commitment to myself to learn all I could about the nature of such consciousness experiences. As part of that commitment, I devoured books on the topic, including books by the Maharishi. In his books *The Science of Being and Art of Living*⁴ and *Commentary on The Bhagavad Gita*, he describes seven different states of consciousness that are available to human beings. These included the ordinary states of consciousness we are all familiar with, i.e., waking, dreaming, and deep sleep, but also an additional four “more elevated states.” Each of these elevated states is characterized by the experience

of “pure unbounded awareness,” yet the context of what that awareness experiences is markedly different in each of the four states:

- Transcendental consciousness. The state of pure unbounded inner self-awareness, the true Self, without perception of the other three ordinary states of consciousness.
- Cosmic consciousness. The state of pure unbounded inner self-consciousness found in transcendental consciousness, yet simultaneously maintained while experiencing any of the other three states of ordinary consciousness of waking, dreaming, and deep sleep. This state is often called “witnessing consciousness” because of the perceived disparity of the unbounded inner self-consciousness while at the same time perceiving the apparent bounded limited objects in everyday life.
- Divine consciousness. This state of consciousness is considered a partial resolution of the disparity of cosmic consciousness in the sense that the separation and witnessing of cosmic consciousness begin to change such that perceptions that had appeared to be spatially bounded objects in everyday life now begin to be seen for their true nature as unbounded consciousness.
- Unity consciousness. Unity represents a resolution of the illusion that the infinite unbounded Self is any different from all that is being perceived. The infinite is seen in each and every object of perception and is known to be what those objects are. Despite also seeing the unique appearance and form of every object of perception, it is simultaneously seen as consciousness itself. There is no longer a sense of witnessing, no longer any duality; all is seen as one infinite totality, as Self. Prior experiences of separation

are now known to have been illusion. The Maharishi also spoke of a further refinement of unity consciousness called Brahman consciousness. The Sanskrit word Brahman refers to the eternal absolute reality, the totality of all existence. Brahman consciousness then is the experience of the totality of all existence, its essential oneness. Interestingly, Maharishi said that the transition from the state of unity to Brahman consciousness takes place on the level of the mind. It is some kind of realization on the level of the intellect that enables one to come into this state of experience.

What Maharishi taught was not new. In fact, many meditation traditions provide insight into what are often called non-ordinary, unitive states of consciousness. In his Special Commentary for this book, Ken Wilber shares such insights from other traditions, including the fourth state called turiya and the fifth state beyond turiya called turiyatita. I found reading Maharishi's books particularly relevant to my experience under the oak tree that day. For the first time, I could put a name to my experience, and I knew someone else had experienced it too. The teachings provided me with an important roadmap as the years unfolded and I continued to experience further transformations of my experience of consciousness.

END OF EXCERPT OF INTRODUCTION

CHAPTER 1

THE NEED TO TRANSFORM MATERIALIST SCIENCE

*Contemporary science is based on the philosophy of materialism,
which claims that all reality is material or physical.*

— Rupert Sheldrake

When Joseph Campbell visited India in 1954, he had already written *The Hero with a Thousand Faces*, which recognizes the universal “monomyth” motif of adventure and transformation found in nearly all of the world’s cultures. He decided he wanted to meet a major guru, so he went to see a celebrated teacher named Sri Krishna Menon who lived in Trivandrum. As soon as Campbell sat down, the teacher asked him, “Do you have a question?”

Campbell learned later that he had the good fortune of asking the same question that Sri Krishna Menon had first asked his own guru: “Since all is the divine radiance, how can we say ‘no’ to ignorance, to brutality, to anything if the universe is a manifestation of divinity?” If that were the case, wouldn’t it mean that “even the base elements of the world are manifesting divinity?” The teacher replied, “For you and me, the way is to say yes.” It confirmed for Campbell his thoughts that anything that fosters separation is false.²⁷

Unfortunately, the materialistic sciences do just that—foster false dualities of spirit and matter where none in fact exist. Modern science casts a judgment upon the nature of the world and discounts the realm of inquiry called the spiritual. One of my interviewees, Julia Mossbridge, beautifully stated that “Judgment is observation without love.” The great Tibetan teacher Djwhal Khul considered judgement “humanity’s greatest heresy.” Our sciences foster duality and judgment - observations without love - resulting, as we will see, in numerous downstream negative personal, social, and environmental consequences.

Campbell left this teacher with new insight and a new way to meditate. He was instructed by the guru to focus his attention between his thoughts. From there, he could gain an intuitive flash of the source field out of which all thoughts and energies arise, including those that structure his own sense of egoic identity. The goal was to move between apparent opposites: stillness and thought, good and evil, up and down, the seemingly material and spiritual, into an experience of unity.

Campbell was on the journey on which all scientists embark to find answers to fundamental questions of self-identity, life, and the broader universal existence. Many scientists hear the call of an ephemeral experience that makes them wonder who they are and how the world works. They then thirst for knowledge and experience that will let them discover the answers for themselves. They choose the scientific path of knowledge and inquiry because it is considered a reliable way of discovering valid knowledge.

Since humanity’s inception, we have been on a path of seeking and attaining increasing amounts of knowledge. Be it Adam and Eve approaching the Tree of Knowledge in the Garden of Eden, or Prometheus stealing knowledge of fire from the Greek gods, we are driven to learn. The so-called Scientific Revolution in 1593 marked the beginning of scientific methodologies as the dominant path to attaining new knowledge. While

there have been clear benefits to the emergence of this way of gaining knowledge, there have also been significant downsides to how it has ultimately progressed.

END OF EXCERPT OF CHAPTER 1

CHAPTER 2

HEEDING THE CALL: THE MAKING OF A “SPIRITUAL SCIENTIST”

We must have perseverance and above all confidence in ourselves. We must believe that we are gifted for something and that this thing must be attained.

— Marie Curie

What prompts an individual to become a scientist and take on this pursuit? Throughout the conversations I had with my fellow scientists, I found remarkably different reasons. Some were deeply sensitive to nature as a child or had innate intuitive or telepathic abilities. For others, it was trauma, a mental illness, or a death in the family. Still others first encountered the mystical through the use of psychedelics or, like me, pursuing a meditation practice. Still others accessed the mystical through a profoundly deep desire to know themselves and their place in the universe.

Varied as these reasons were, they were pivotal moments in each interviewee’s life—moments that opened the door to their journey. It was the proverbial “heeding the call to adventure” stage of the monomyth. A consistent feature among them is that they were all deeply personal experiences. The memory of these experiences and the lasting imprints

they left on their consciousness continue to be guiding forces through their lives.

THE CALL DURING CHILDHOOD

For Rudolph (Rudy) Tanzi, his opening into the metaphysical wasn't through trauma, drugs, or meditation, but through playing a game with his twin sister. When they were children, they played a game where they tried to convince each other that nothing existed. They would begin the game with a series of questions to each other, "What if there was no house?" "What if there was no neighborhood?" "What if there was no city?" "What if there was no earth?" The questions would go on and on until they arrived at the question, "What if there was no universe?"

If they were successful with the game, as they arrived at the place where nothing indeed existed, not even the universe, they would get a unique experience in the pit of their belly that they called the "flip." They would race each other to see who could get to the flip first, to experience the feeling that absolutely nothing existed.

Rudy told me that his experience of the flip was deeply visceral and energetic in how it affected his consciousness. It was something beyond anything he could experience in any other circumstance in his life. It wasn't until many years later that he was able to categorize the flip experience as a window into the metaphysical.

The more they played the game and experienced its rewards, the more Rudy's interests in the mystical grew. He said, "The game led me to wonder, 'What is consciousness, what is awareness, what is the universe?'" He eventually decided that since science allows us to measure what meets the eye, perhaps if it could also lead him to what lies beyond the senses,

he should learn the scientific method in his quest to understand the metaphysical.

He said those earliest passionate interests and his willingness to explore the metaphysical made him a different type of scientist, helping him maintain an open mind and keep thinking about the big questions. He said it kept him thinking “outside of the conventional box of science.” He also shared that he’s “always been titillated by the idea of new discovery. I love when you discover something new and for that moment, or for that day or perhaps a few weeks, you’re the only person that knows something really important about the universe that nobody knew before.”

Science fiction, too, became a passion because, through it, he could learn about the paranormal, telepathy, and mediumship. He read voraciously on these topics. He recalled that his friends wondered, “What’s wrong with Rudy?” because all he was interested in talking about were these strange things.

I met Rudy through Deepak Chopra. He and Deepak had just published the book *Super Genes*, and Rudy came to the Chopra Center for Wellbeing in Carlsbad, CA, to give a talk. We later worked together on the SBTI Study I wrote about in the Introduction. Rudy is an amazingly talented human being. In addition to being a top-tier scientist—having discovered three of the four genes linked to Alzheimer’s disease—he’s also a professional musician, having played with the rock band Aerosmith. Some years ago, he appeared in a *GQ Magazine* photo shoot for a campaign called “Rock Stars of Science.” Today, he is the Joseph P. and Rose F. Kennedy Professor of Neurology at Harvard University and Director of the Genetics and Aging Research Unit. In addition to the Chopra Center, he’s shared his explorations of consciousness at numerous meetings around the world, including the annual Science and Nonduality conference.

Other interviewees had a different kind of sensitivity as children, not in a form that manifested while playing a game, but a sensitivity to the natural world around them, prompting in them a deep yearning to understand the world and their relationship to it.

Neil Theise is a Professor of Pathology at NYU Grossman School of Medicine, a diagnostic pathologist who also does academic work in stem cells, liver disease, and the anatomy of the human interstitium, and “dabbles in complexity theory.” Neil grew up in a household that was open to spiritual exploration. He said that religion “was a lovely thing as it was practiced by my family. It was very rich, warm, and non-punitive.” His father was actually part of the *Kindertransport*, or Children’s Transport, a rescue effort between 1938 and 1940 that brought thousands of refugee children, the majority of them Jewish, to Great Britain from Nazi Germany. “That’s how he survived.” His father’s parents, however, did not survive. “A lot of our family was killed. I grew up in a world of survivors where there was an imperative to find a way to flourish.”

As a young child, Neil experienced that world with “a deep-felt sense.” He felt the world was highly personalized and rich with feeling. “If I kicked a rock, and it went into a sewer, I felt bad because the rock would be unhappy. If I found ants in our home, I would carry them outside because I didn’t want my mother to notice, since she would then call the exterminator, and there’d be an ant Holocaust.” That intimacy with the world turned into curiosity, which eventually turned toward medicine and the sciences.

His mother was from England, from a family with a long line of rabbis going back to the Middle Ages—a true lineage, I thought. She “operated in the world through magical realism, which included her being able to communicate with the deceased.” He explained, “Magical realism wasn’t a style; it was how my forebears experienced the world, and my mother

very much experienced it that way. There was the emotional sense of being connected to God, which included ritual, holiday celebrations, and family relationships.”

Magical realism is something that Neil, too, has direct experiences with. I found that linkage interesting because there is evidence that lineages can carry abilities such as clairvoyance and clairaudience through generations. After his mother passed away, Neil told one of his mother’s friends that his mom had recently been communicating with the deceased. The friend replied, “Your mother was always seeing dead people!”

One of Neil’s dearest friends, Richard, died during the AIDS epidemic. “Before he died, I said to him, ‘Look, you will probably have more important things to do, but if, after you’re dead, you find yourself aware of things and able to interact with this world, and don’t have anything more important to do, I’d love to have you around for a year as a guardian angel.’” Richard promised he would stick around if he could. Neil shared that he did stick around. “He was a very vivid presence for me.”

While Neil was in college, a cousin from Canada visited and gave him a copy of James Michener’s *The Source*, which describes the rise of Jewish mysticism during the medieval period. He had never heard of Jewish mysticism; Michener’s novel opened him to those new ideas.

As he learned about Jewish mysticism, he was moved by the idea that, as a human, we can experience God’s perspective of the world, particularly as he contemplated the Jewish Holocaust. He then related a story of a walk on the beach with a friend shortly after gaining these newfound insights from Jewish mysticism. As he related the story to me, he choked up. While walking, he was sharing with his friend what he was learning about Jewish mysticism, and he had a sudden insight. He said to his friend, “The idea is that if a human can have an experience of God’s perspective of the world, then everything can make sense.” He was thinking about the Holocaust,

in particular. “So that’s when I started thinking about mystical stuff and wanting to learn about it.”

A rub for Neil, however, was in the classic teachings in Judaism, you can’t formally practice Jewish mysticism until you are forty years old, married, and have attained a full understanding of the Talmud. “I was gay and couldn’t be married, so I couldn’t go that route.” During his senior year of college, someone gave him the book *The Three Pillars of Zen*, by Roshi Philip Kapleau. The book contained meditation instruction and descriptions of people’s firsthand experiences of enlightenment. “I thought to myself, ‘This is the kind of stuff I was reading about in Jewish mysticism, but more so, this is a how-to guide rather than a novel.’” Zen offered him a route to study mysticism that Judaism would not permit him to pursue.

A few years after that his husband Mark read an article about a Zen monastery in the Catskill mountains where one could do retreats. Mark said, “You’ve been talking about this Zen thing forever. Why don’t you go and do it?” So he did and started a deep dive into Zen practices. His practices included the use of Zen Koans, which are “the sort of thing that, when you’re working on it, there’s no intellectual way through it. You can’t answer it, but you can’t let it go either. It sort of wears away, even when you’re not thinking directly about it.”

His Zen practices eventually led to a deep realization of the “emptiness of inherent existence.” He was in the Zen center in New York City, sitting on his cushion. “I looked up across the room, and on the altar was a burning stick of incense turning into smoke. This was just one of those moments where you get it. I realized the emptiness of inherent existence. Something is a thing, and at the same time, from another perspective, it is a phenomenon, and one does not exclude the other. But you can only see one or the other, depending on your perspective.” He said, “I got very excited; it was a blissful moment.”

The next time he had the opportunity to meet with his Zen teacher, he described what happened and asked, “Is that what emptiness of inherent existence means?” She responded matter-of-factly, simply saying “Yeah,” confirming his experience. He said, “That’s it?” She said, “Well, yes, that it’s. It’s not easy, but it’s simple,” meaning the emptiness of inherent existence is simple, whereas getting to that realization is not. “Since then, for me, it’s been just how those two things dance with each other.”

He described it “as a gifted moment” because it helped solve something he had been living with since he was a young boy. He had his Jewish tradition and its theology, and he had what he was learning about in science. They were separate, and that was okay. He didn’t think they had to be connected. “They were in two separate boxes in my brain.” He wanted to do both and did not want to choose sides. Going forward, his Zen realization brought those two boxes together for good. The spiritual informs the science, and the science informs the spiritual; they’re no longer separate things to me—they came together.” Questions that he had thought were spiritual have scientific answers, and questions he thought were scientific have spiritual implications.

Christine Peterson’s early spiritual experiences came through as a child with her deep connection with the natural world. Christine grew up on a 50-acre farm in West Virginia, where the nearest town was an hour away. Other than her parents, she wasn’t in contact with many people. As a child, if she wasn’t tending to the cows, she would climb up to the top of the mountain behind their home and stare at the sky. “I had some of my first nondual consciousness experiences on the top of that mountain,” she said. Nonduality, or living in nondual awareness, refers to a state of consciousness where the dichotomy of “I and other” is transcended and awareness is experienced as oneness.

“I would stare into the expansiveness of the blue sky, with maybe a cloud floating by, and just feel my body start to melt away and merge into that expanse.” She didn’t have the words then to describe it but can now say that it was a dissolution of her sense of individual self into a much larger non-personalized Self.

Christine said that losing the typical sense of self boundary that most people carry around wasn’t in any way upsetting or disconcerting. In fact, she preferred it. In that nondual awareness state, she would feel more love for and connectedness with the cows, the rocks, and the plants—all of the natural world. She added that those early experiences of the expansive nature of her own consciousness sparked her eventual movement into science.

While an undergraduate student at the University of Virginia she found an ashram, the Satchidananda Ashram called Yogaville. There she was exposed to “hatha yoga and, luckily, to the concept of living yoga alongside of the asana itself.”

I asked her what she meant by “living yoga.” She clarified that she learned all the limbs of yoga, not just hatha (the asana postures), but also bhakti, jnana, raja, karma, and japa yoga. She said people who go to yoga studios don’t often learn the full context of what yoga actually is. After our interview, I went to the Yogaville website and learned that they teach what is called Integral Yoga, which “synthesizes the various branches of yoga into a comprehensive lifestyle system, the purpose of which is to support the harmonious development of every aspect of the individual.”

While later getting her Ph.D. in Microbiology & Immunology from the Institute for Biomedical Sciences at the George Washington University School of Medicine, she started taking yoga teacher training programs. She also started taking formal meditation classes.

While learning meditation, she met someone who would later become her Tibetan philosophy teacher. His name was Llama Tsoknyi Rinpoche. While on a meditation retreat with the Llama, he taught her and the rest of the students a specific meditation technique called Sky Gazing, the purpose of which was to “help the practitioner find release from the narrow confines of the individual personality to connect to the expansive experience of their authentic nature as awareness.”

As Christine was learning this, she thought to herself, “Wait a minute, I know this technique!” It was what she had been doing as a child on the mountains of West Virginia. She learned there was a name for what she had practiced and experienced. It was part of a formal meditation system in Tibet.

I asked her how learning this information might have affected her spiritual experiences. She said, “It allowed me to go deeper with the practices themselves and also, importantly, to have a context for what I was experiencing.” She felt she grew more from the experiences because she now understood what was going on.

During graduate school, she went on a three-day retreat with the spiritual teacher Amma and there learned about Ayurveda. “When I heard what Ayurveda was, I had a recognition that I needed to study this ancient medical system. It lit a spark in me.” It gave her goosebumps speaking about it during our interview.

Over the subsequent years, she’s taken intensive training in Ayurveda, learning the different daily and seasonal practices which benefit her own health and well-being. In addition, she graduated from the California College of Ayurveda and, with her certification, helps other people benefit from Ayurveda.

Christine said that the “purpose of Ayurveda is to help us realize our connectedness to all of life, to balance and extend the life of the human

being and support self-realization so the natural state of Samadhi can arise.” As she said these words, I realized that Ayurveda was much more than I had previously thought it to be. A few years ago, I had the pleasure of traveling with Christine to Kerala in Southern India, the acknowledged birth place of the Science of Ayurveda. It was a wonderful and adventurous trip.

Today, Christine is on the research faculty at UC San Diego, at the forefront of scientific research showing how traditional herbal medicines cultivate health for our gut microbiome and can have positive effects on diseases such as Parkinson’s. She’s published many groundbreaking papers on these topics.

I asked Christine if she thinks there is hope for the materialistic sciences to be transformed. She said, with the rise of systems biology, she sees hope because that approach to science is by nature more inclusive and expansive, taking the scientist further and further beyond what were previously thought to be the limits. She explained that we’ll need a new system of science with new methodologies and tools of assessment. “I’ve heard people complain and ‘call out’ science as being too materialistic, but they never really offer a new system or framework to replace it.”

She recalled the book *Flatland*, by Edin A. Abbott, where everyone can only see in two dimensions, so their view of reality is skewed and not completely relevant. They needed a new perspective. I hadn’t read the book in ages but wondered if the people in that book who lived in 2-D were deeply prejudiced against concepts of 3-D and beyond, as we see in scientism today.

END OF EXCERPT OF CHAPTER 2

CHAPTER 5

GIVING BACK AND THE NEXT GENERATION

You cannot transmit wisdom and insight to another person. The seed is already there. A good teacher touches the seed, allowing it to wake up, to sprout, and to grow.

– Thich Nhat Hanh

Nearly all scientists help train the next generation of scientists. The mentee becomes the mentor. There's a stage in the monomyth when the hero or heroine returns to their community to teach what they have learned. They've had some sort of illumination, a transformation on their journey, and now are compelled to share it with others. Some of my interviewees give back through teaching. Others give back through their medical practice. In each case, their new insights greatly influence how they approach their work with others.

Marilyn Schlitz grew up in the 60s and 70s when “Detroit was literally on fire.” In her early teens, she felt a deep inner impulse to do something about it. “I wished I could change the world then, but I was an impotent white girl in a largely black city, and what was I going to do?” As a teenager, she had taken psilocybin and “merged into the godhead,” which significantly

influenced the type of teaching and scientific work she would eventually pursue.

She had been ready to head off to the University of Michigan where she had been accepted for her undergraduate work. Then her father died so she couldn't leave home; she was needed to help manage things. As a result, she attended Wayne State University in downtown Detroit. She said, although it was a major disruption to her college plans, "it turned out to be the best thing that could have happened because I enrolled into a program at Wayne State called Monteith College. The program was based on the work of Thomas Kuhn and *The Structure of Scientific Revolutions*, with a focus on getting science into the humanities."

Marilyn said, "Getting into that program blew my mind open to the idea that maybe revolution is actually possible." She was acutely aware that we live within a certain worldview, a social paradigm, one that Detroit was evidence of, but she soon began to understand through the program she enrolled in that paradigms aren't absolute and can be changed. "So suddenly, this disempowered girl from Detroit had pretty lofty ideas about being part of a paradigm shift. It caught fire in my imagination!"

While at Wayne State, she did an internship at the medical school with a neurophysiologist named Robin Baracco. They often spoke about the mind, the brain, and consciousness. At one point, he gave her the book *Psychic Exploration: A Challenge for Science, Understanding the Nature and Power of Consciousness* by Apollo 14 astronaut Edgar Mitchell, "and that completely changed my life. I decided I wanted to be a revolutionary in consciousness, to show that we have all these human potentials that can transcend the material world as we know it. I know, I was really grandiose at that point."

She sought out and landed a summer internship in a lab doing psychic research, including remote viewing, and there she learned that she, too,

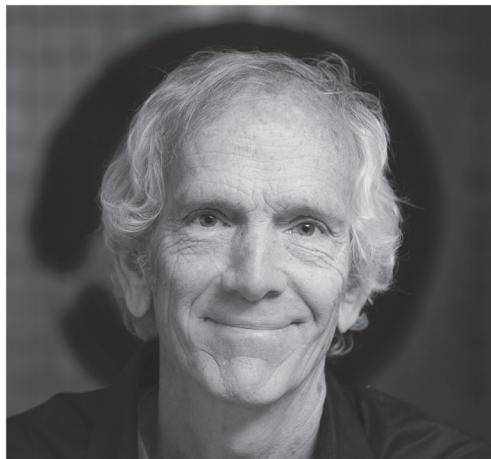
had certain psychic abilities that could be measured in the lab. It was an exciting revelation for her. Upon graduation, she landed a research job “studying the science behind the mysteries of consciousness, healing, and transformation.” She eventually headed to Stanford University in Palo Alto, CA, running the parapsychology program there. Although it was a great position, and at Stanford no less, she soon found herself as Director of Research at IONS. She remained at the Institute for twenty-seven years, including being president. “It was a great place to grow up.” Her next stop was at Sophia University in Palo Alto, where she is now Chair of the Transpersonal Psychology program.

Over the years, Marilyn published numerous scientific papers and books on the mind, consciousness, and psychic abilities. I asked if any of her research test subjects ever experienced an enhancement of their psi abilities by participating in the research. She said she wasn’t aware of this, but she was aware that the research affirmed for many of the test subjects that their prior psychic experiences were indeed valid. “To be in a scientific lab being studied with established experiments was affirming for many.”

As part of her giving back, Marilyn created scalable educational programs that bring these ideas on consciousness and human potential out into the world and, in particular, serve health professionals. She’s also made films on these topics, including *Death Makes Life Possible* with Deepak Chopra.

END OF EXCERPT OF CHAPTER 5

ABOUT THE AUTHOR



Paul J. Mills, Ph.D. is Professor of Public Health and Family Medicine, Director of the Center of Excellence for Research and Training in Integrative Health, and Former Chief of Behavioral Medicine at the University of California San Diego. He has over 400 scientific publications in the fields of pharmacology, oncology, cardiology, psychoneuroimmunology, behavioral medicine, and integrative health. He published some of the earliest scientific research on meditation. His work has been featured in *Time* magazine, *The New York Times*, National Public Radio, *US News and World Report*, *Consumer Reports*, *The Huffington Post*, Gaia TV, and WebM.D., among others. He's presented his work at hundreds of conferences and workshops around the world, including at the United Nations.