Quantum Physics and Spirituality Made Simple

At last, science and the soul shake hands. Writing in a style that is both lucid and charming, mischievous and profound, Dr. Amit Goswami uses the language and concepts of quantum physics to explore and scientifically prove metaphysical theories of reincarnation and immortality.

In *Physics of the Soul*, Goswami helps readers understand the perplexities of the quantum physics model of reality and the perennial beliefs of spiritual and religious traditions. He shows how they are not only compatible but also provide essential support for each other. The result is a deeply broadened, exciting, and enriched worldview that integrates mind and spirit into science.

“Dr. Amit Goswami is one of the most brilliant minds in the world of science. His insights into the relationship between physics and consciousness have deeply influenced my understanding, and I am deeply grateful to him. *Physics of the Soul* is both challenging and brilliant.”

— DEEPAK CHOPRA

“...one of the most original contemporary thinkers and writers in the field of physics and consciousness...Goswami makes difficult concepts accessible and exciting.”

— STANLEY Krippner
It has been a dozen years since Physics of the Soul was first published and I am happy to say that the theory, data, and conclusions reported in this book remain ever more validated. In short, survival after death and reincarnation are valid scientific concepts.

When you read Physics of the Soul, you will discover that the central theory of survival after death and reincarnation reported in the book crucially depends on a concept called quantum memory. The idea is that part of our memory (call it quantum memory), specifically that of our learning, is nonlocal, which means that this memory resides not locally in the brain but outside of space and time altogether. In this way, this memory can transmigrate across space and time without signals, without transfer of energy. The question of energy is important because antagonists of the idea of survival after death make big hoopla about the fact that the weight of a living body does not change with death.

Also crucial is to understand that survival means nothing much if it is not a part of us that defines us in essence. If you think about it, your history may not be your essence but what you learn in your life. If this concept is too jolting in this materialist age, understand that this is what spiritual traditions have told us for millennia; quantum physics is just validating their contention.

Nonlocality—signalless communication—is a quantum concept. Although experimentally verified, many physicists are skeptical about its validity, especially in the macroscopic
domain of reality. Don’t worry! I have reported the data in the body of the book; just keep an open mind when you explore the idea.

If it still sounds like too much of a risk to invest in a theory of survival and reincarnation, scientific as it may be, relax. There is much empirical evidence precisely for this quantum model of survival and reincarnation that the book will present and I won’t mention here. There is however, one piece of astounding data I will present that I inadvertently left out of the book.

There is direct evidence that suggests that the memory of a learned propensity is nonlocal. In the nineteen sixties, the neurophysiologist Karl Lashley did an experiment in which he was trying to study the location of the learning of a propensity in the brain. So he trained rats to find cheese in a Y-maze and then systematically began to chop off parts of the rat’s brain to test if the propensity remained. Strangely, he found that even with fifty percent of its brain removed, a trained rat found its way to the cheese. The only viable conclusion is that the learned memory of a propensity is nonlocal, for which the ancient term is *akashic*, a Sanskrit word meaning outside of space and time. (Another conclusion that the brain is holographic was popular for a while but is no longer considered viable.)

So go ahead, believe it! The idea that our memory of learning resides outside of space and time, that is, it is nonlocal, is scientific. It is not foolhardy to explore it. There really is much to gain from your exploration. It will change your lifestyle from pessimism-dominance to optimism for one thing. If you are already optimistic, these ideas will give you a sense of personal purpose and meaning that you will find soul-satisfying.

*Explore, explore!*
*There are too many ideas, meanings, and values*
*To explore in one life, you say.*
*Never fear. Your death is only a renewal.*
*The human condition is unique!*
You do come back again and again!
Aren’t you curious?
What is at the end of your exploration?

For me, developing a theory of survival after death and reincarnation has been a most rewarding journey. As you will read, the journey began with an old lady asking me “What happens when we die?” I did not know then, nor did I believe that we can know. But a Theosophist came into my life and reminded me of traditions that do believe and that in fact, I grew up in one of those traditions. Then a dream came with a challenge, “The Tibetan Book of the Dead is correct, and it is your job to prove it!” And finally, a woman, a graduate student in philosophy to boot, wanted me to counsel her about grieving over her boyfriend’s death. This series of synchronicities led me to the discoveries reported here.

As you read the book, you will see that the theory presented here also explains another highly controversial phenomenon—channeling. Channeling is the phenomenon in which people called channelers claim to embody the “soul” of deceased people. Considering that all alternative models of channeling are based on some kind of dualism, the model explored here is the only scientific explanation of these phenomena.

According to this model, only the learned propensities or character of the deceased can be channeled. This is verified by experiments reported in the book. Here I want to add a few comments:

1. Many channelers not only channel entities and perform unusual feats, but they also present ideas and story lines, insisting that these come from the channeled entities. These claims should be viewed with suspicion.

2. What makes channeling possible between a channeler and a channeled entity? Not everyone can channel! I think that some people die with the special intention that their learned propensities
be available to the world of humans even while they are discarnate; other people, channelers, are psychics with specially honed intentions for channeling.

3. Can we all learn channeling? I have written in a book called *Creative Evolution* on how a few people can change the course of human evolution by working on developing positive emotional brain circuits working in a community (much like a tribal entity of the old). The idea is that in a few generations much of humanity will be born with such brain circuits; the transmission will be made via the nonlocal memory of their morphogenetic fields—an idea of Rupert Sheldrake’s further developed in this book. I really think that if we use intentions for channeling en masse, the nonlocal propagation of the learned propensities will speed up.

One final comment. I told the story of a young woman coming to me for counseling on grieving. I did not know what to counsel her then. Now I do: Get over your grieving as soon as you can because your grieving is holding up the intentions of the deceased person. Let him go free.

Enjoy the book. This research has changed my life. I hope it will enrich yours.
What is death? This seems easy to answer. Death is when life ends; it is the cessation of life. But do we know what life is? Do we know what its cessation means? Those questions are not so easy to answer, at least not in science.

Most people are little interested in scientific definitions of life and death. In 1993, after my book came out proposing a new scientific paradigm for the nature of reality, a science based on the primacy of consciousness, I was on a call-in radio show. The first question was not on the nature of reality or consciousness. It was, is there life after death? At first, I was surprised; then I realized that this is the ultimate question about reality for many people.

Even children want to know. In a letter to God, a child wrote, “Dear God, what happens when we die? I don’t want to do it. I just want to know what it is like.”

What happens after death? In the past, this was a question you would take to your local priest or minister or guru or mullah or rabbi or Zen master or shaman. This was not regarded as a question of science at all. Science in those days dealt with mundane aspects of the world; religion was the source of answers to questions that mattered more intimately to people: how to live life, what happens after death, how to know God, and such.

Not that one always got answers. A Zen aspirant went to a Zen master and asked, “What happens after death?” The Zen master replied, “I don’t know.” The practitioner was surprised.
“But you are a master!” he protested. “But I am not a dead master,” came the answer.

However, many gurus of various religions were often less hesitant to provide answers. And the answers, for the most part, were simple (at least, those from organized religions). God is the ultimate emperor of the world, which is divided into good and evil. If you belong to the good, you end up after death in Heaven, a very desirable place of peace and joy. If, however, you follow evil, death thrusts you into Hell, engulfing you in fire and brimstone and suffering. The message of religion was “be good.” And if being good is not rewarded here on Earth, it will be rewarded after death. Alas! In this sophisticated scientific age, this kind of answer does not satisfy.

So are you going to get sophisticated and satisfying answers in this book? I hope so. The answers are based on a new physics called quantum physics, which when grounded in the philosophy of primacy of consciousness, gives us a visionary window through which flow gale winds of new answers to age-old questions. The questions and answers regarding what happens after death are only the latest of the discoveries of this new science. Read on.

What Survives?

Who are you after death? Clearly, the after-death you could not be a physical or corporeal entity. So the idea of an incorporeal soul is popular. It is your soul that survives the death of your body, you are told. And after death, the soul goes either to Heaven or to Hell, depending on how you fare on judgment day.

The pictures that many people make of what they expect Heaven to be like suggest that even in Heaven they very much expect to have their egos intact, as in Hollywood movies. To them, the ego is the soul. However, objections can be raised against such a belief.

How do we get our ego-identity? Clearly, our experiences as we grow up shape the ego. Memories of these experiences most probably are preserved in the physical brain. Moreover,
experiences alone (nurture) are not the whole of ego-development; it seems logical that our genetic endowment (nature) also plays a role. But both genetic and brain memories are physical. With the demise of the body and the consequent decay of these physical memories, can the ego function?

Another argument against the soul as ego has been raised by the psychologist Charles Tart. Tart (1990) points out that the body and the brain are stabilizing influences for our identity. In dreaming, for example, we lose awareness of our physical body, and look what happens. Our identity can shift from one dream-body to another many times during the dream; there just isn’t much stability in who we identify with. Similar things happen with sensory deprivation and psychedelic drugs. The normal, stable ego-identity that we experience in our waking awareness disappears in these altered states of consciousness. Tart thinks that this may indicate what the altered state of consciousness that we attain after death is like, unless there are other kinds of stabilization processes that we don’t know about.

So the nature of the soul, the nature of what survives at death, is a difficult and controversial question. It gets even more controversial, even more puzzling, when we ponder the continuum pictures—life and death as a continuum—of many cultures. Not only does something survive death, but that something returns in another body in another birth, and on and on the process goes.

Reincarnation

The picture of a soul surviving in either Heaven or Hell after death is more or less the picture in popular Judeo-Christian cultures. Other cultures have it somewhat differently. Sometimes—for example, in Islam—the differences are minor. But sometimes the differences in the view of after-death reality are quite radical. Hindus in India, Buddhists in Tibet and elsewhere (although in Buddhism the concept of soul is very subtle), and many people of Chinese and Japanese ancestry even outside Buddhism believe in the soul and in Heaven
and Hell, but for them a sojourn in Heaven or Hell is only the beginning of the journey. Heaven and Hell, in these cultures, are temporary residences, after which the soul must once again return to Earth. How long you stay in your temporary Heaven or Hell depends on your karma, a concept of cause and effect that comprises a ledger of good and evil but with one major difference.

Doing good accrues you good karma, and bad deeds increase bad karma in your karmic ledger—just as in Christianity. Bad karma is unwelcome, of course; for example, many Chinese fear that if their earthly deeds are really bad, they will be born as rats or even as worms in the next life. But even good karma does not stop the wheel from turning. However much good karma you accrue, you cannot stay in heavenly perfection forever; you always come back to earthly imperfection. Thus enters the subtle idea that even good karma is not good enough. Even then you remain tied to the wheel of karma, the cycle of recurring reincarnation. And the karmic wheel is seen as propelling the vehicle of suffering.

What can be better than accruing good karma, doing good in all your earthside actions and experiences? The Hindu and Buddhist idea is that there is an ultimate, perfected way of living, the discovery of which gets you off the wheel of karma. Hindus call this *moksha*, literally meaning liberation; and Buddhists call it *nirvana*, literally translated as extinction of the flame of desire.

We can use philosophy to explain these differences between the Judeo-Christian and Hindu/Buddhist views in what happens after death. In one philosophy, the specific model of after-death reality that a culture develops depends on whether the culture is materially rich or poor. The purpose of religion is to entice people to live in the good rather than in the evil. If the culture is materially poor, people live in hope of enjoying the good life after death. If they knew about reincarnation, they would not hesitate to be bad once in a while and to take the risk of temporary hell. There is always the next life for being good. So the idea of eternal hell is important to keep
them in line; they already know hell, they don't want an eternity of it. In affluent societies, on the other hand, the idea of reincarnation can be told.

In affluent societies, people live in a class system in which most people are middle class. If you are middle class, then the worst thing that can happen to you is to become poor. Then the threat of reincarnation works since bad karma not only begets hell, it also begets a lesser life form (a lower class, for example) in the next incarnation. Such was the case with the Hindu caste system in affluent ancient India, where the idea of reincarnation flourished. This is now changing in India; most people are now poor there and the idea of reincarnation is no longer all that popular. On the other hand, today's Western societies with increased affluence have increasingly become class systems. And no wonder the idea of reincarnation is now taking hold in these societies.

It makes sense. In After Death 100, you learn the basic concepts, God, good and evil, soul, heaven and hell. In After Death 300, you get the idea of reincarnation, the wheel of karma. There you ask questions that you couldn't think of in the one-hundred-level course. If there is life after death, why not life before life? Why do bad things happen to good people? And the best one, how can a truly just and benevolent God not give everyone the good life of Heaven?

Compared to these courses, the idea of liberation is a five-hundred-level graduate course. You enter it only after you have indulged in a lot of “karma-cola.” You enter it when you ask questions about the very nature of reality and about your connection to it, when you intuit that you, the world, and God are not separate and independent from one another. You enter it when the whole world of sentient beings becomes your family, and you want to serve your family in a new way.

The philosopher Michael Grosso has called the recent revival of interest in reincarnation in America “the spontaneous formation of a myth of reincarnation,” but it is more than the formation of a myth. I think we have graduated en masse from After Death 100 to the three-hundred-level
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course. And some of us already ponder taking the graduate course.

When does the transition to the next-level course take place? The philosopher Alan Watts explained it pretty well. To Watts (1962), the wheel of karma is much like being at a carnival. Initially, as a soul, you are less adventurous. You hold on to the good life when you reincarnate. Only later do you realize that there is a greater learning opportunity in taking the more risky rides—being born as poor (but virtuous) or living a bumpy but creative life. But, even then, the ultimate suffering of boredom catches up with you; the idea of eternal attachment to the karmic wheel will seem dreadful to all of us sooner or later. The filmmaker Woody Allen in *Hannah and Her Sisters* captures this sentiment perfectly:

... Nietzsche with his theory of eternal recurrence. He said that the life we live, we’re gonna live over and over again the exact same way as eternity. Great. This means I’ll have to sit through the Ice Capades again. It’s not worth it.

(Quoted in Fischer 1993)

When we feel this way, then we can turn to the idea of liberation.

Notice that both the Christian idea of eternity in heaven and the Eastern idea of liberation, in essence, refer to a stage that we truly can call immortality of the soul—no more birth, no more death. The former (heaven) is only a somewhat simplified version of how we get there—it omits the intermediate steps.

So don’t think that ideas of reincarnation are entirely Eastern, only recently imported to the West. Reincarnation was an accepted part of the Judaism into which Jesus was born. It is held by many scholars that before 553 A.D., Christianity also accepted the idea of reincarnation. In that year, it is said that a decree was passed by the fifth Ecumenical Council against the idea that souls reincarnate, although other scholars think that the council never officially made such a decree.

(For a good discussion, see Bache 1991 and MacGregor 1978.)
Many scholars also think that the division about reincarnation in the West is not a division between West and East but a division between the esoteric and exoteric threads of Western religions. Reincarnation is embraced by Sufis, the esoteric branch of Islam. Hasidic Judaism supports reincarnation, as do the gnostic and other mystical traditions in Christianity (Bache 1991; Cranston and Williams 1984).

The idea of reincarnation occurs frequently in Western thought outside of any religious context. Beginning with Pythagoras and Plato, people such as David Hume, Ralph Waldo Emerson, Henry Thoreau, Benjamin Franklin, J. W. von Goethe all believed in reincarnation. Goethe wrote:

*The soul of man is like to water;*
*From Heaven it cometh*
*To Heaven it riseth*
*And then returneth to Earth,*
*Forever alternating.*

(From *Song of the Spirits over the Waters*, as quoted in Viney 1993)

And Franklin wrote for his own epitaph when he was only twenty-two:

*The Body of B. Franklin*
*Printer,*
*Like the Cover of an Old Book,*
*Its Contents Torn Out*
*And*
*Stripped of its Lettering and Guilding,*
*Lies Here*
*Food for Worms,*
*But the Work shall not be Lost,*
*For it Will as He Believed*
*Appear Once More*
*In a New and More Elegant Edition*
*Revised and Corrected*
*By the Author.* (Quoted in Cranston and Williams 1984)
The Theosophy movement, in which reincarnation is a basic doctrine, rapidly took hold in the West in the nineteenth century because the seed for accepting reincarnation was already there. More recently, public opinion polls indicate that a substantial number of Westerners, perhaps as large as 25 percent, believe in reincarnation (Gallup 1982). The philosopher C. J. Ducass maintained that “the belief in the continuity in life originates [in children] altogether spontaneously.” The data we have of reincarnational-memory recall shows that there are now many such cases in the Western world (Stevenson 1974). If reincarnation is not a culture-bound theme, if it is universal, then it is natural to ask if the idea is scientific.

Are Survival and Reincarnation Ideas Scientific?

Does any of this discussion make sense under the scientific scrutiny of our age? Several decades ago the answer would necessarily have been a resounding no, but not anymore. A primary reason is good data. I referred above to the data concerning reincarnational-memory recall. Much of this data, aspects of which have been verified, is about children recalling their past lives. Much more data has been obtained from what is called past-life regressions: people seem to remember past-life incidents under hypnosis, trauma, drugs, or other special techniques. (For a review, see Cranston and Williams 1984.) And much of the recalled memory has been corroborated. In many cases the possibility of fraud has been eliminated.

Most importantly, reincarnational-memory recall is not the only data. Near-death experiences—experiences of people who are brought back from clinical death states—corroborate very well the descriptions of after-death reality, at least some phases of it, found in “books of the dead” of ancient cultures. (For a review of books of the dead, see Grof 1994.) Near-death experiencers describe being out of their bodies, going through a tunnel into another world, seeing long-dead relatives, spiritual beings of light, and so forth.

In the past few decades, science has also begun a timely but unexpected reevaluation of ancient wisdom. Whereas the
general trend of science since the seventeenth century has been to evolve toward a material focus, science in the closing decades of the twentieth century began to explore the previously marginalized spiritual arena. In this book I will demonstrate that the aborning new paradigm of science is quite consonant with ideas such as God, soul, heaven, hell, karma, reincarnation—the whole gamut.

Such ideas are extremely subtle when properly formulated and understood. Our conditioned tendency is to think about them in a crude, materialist manner. For example, most people think of heaven as a place patterned after Earth (witness some of Hollywood’s movie depictions). Popular religions often portray it that way, and we fall prey to that mode of thinking from childhood. But clearly, the “other world,” if it exists, must be radically different from this one.

Modern science has pretty compelling support for a monist world—the idea that there is only one substance that makes up reality. If there were a dual world of soul substance, how could such a world interact with the material one? What can mediate such interaction? Clearly, neither soul substance nor material substance can act as the mediator. Also, would not such interaction involve the exchange of energy between the two worlds? If so, the energy ledger of the material world would show occasional excess or deficit, but the truth is, it doesn’t. That the energy of the material world is a constant is a physical law—the law of energy conservation. Therefore, the scientific wisdom, rightly, is to avoid interaction dualism (a legacy of the philosopher René Descartes) in our thinking about reality; dualism and science are like oil and water: they don’t gel.

So the old science of the past three centuries taught us that all phenomena are phenomena of things that are made of

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1I use the word “materialist” to denote people who believe in the primacy of matter—that only matter is real; such people are also called material realists.
matter. It is a monism based on the idea that matter is the
ground of all being. The new paradigm posits instead a
monism based on the primacy of consciousness—that con-
sciousness (variously called Spirit, God, Godhead, Ain Sof, Tao,
Brahman, etc., in popular and spiritual traditions), not matter,
is the ground of all being; it is a monism based on a conscious-
ness that is unitive and transcendent but one that becomes
many in sentient beings such as us. We are that consciousness.
All the world of experience, including matter, is the material
manifestation of transcendent forms of consciousness.

The allegory of Plato's cave makes the situation clear.
Plato imagined human experience to be a shadow show: We are
in a cave strapped into chairs so that we always face the wall on
which a light from outside projects the shadows of ideal archetypal forms. We take the shadows as reality, but their source is
behind us in the archetypes. And ultimately, light is the only
reality, for light is all we see. In monism based on the primacy
of consciousness, consciousness is the light in Plato's cave, the
archetypes make up the transcendent reality, and the shadow
show is the immanent reality.

Such a monistic view of reality, which I call monistic ideal-
ism, is very old and constitutes the basis of all the world's
great spiritual traditions, which is why it is sometimes called
the perennial philosophy. In esoteric Christianity, the ground
of being is called the Godhead, the transcendent archetypal
world is heaven, and the world of experience is Earth. In the
past, the scientific acceptance of this view was limited because
idealists could not explain concepts such as transcendence and
self-reference (how the one divides into a subject/self that can
refer to itself and object(s) that are separate from itself) in sci-
entifically accessible terms. The new paradigm of a science
within consciousness, sometimes called idealist science, began
when these concepts gained scientific credibility. This has been
the subject of several recent books, including my own
(Goswami 1993; Herbert 1993).

This is genuine progress. Materialism is pure metaphysics;
there is no way to verify objectively that everything, including
mind and consciousness, arises from matter. The perennial philosophy of old was what we may call experiential metaphysics because great spiritual teachers from all traditions have always claimed to have directly seen that being is grounded in a limitless, transcendent, and unitive consciousness. In contrast, monistic idealism—perennial philosophy in the new context of the science within consciousness—is not only experiential but also experimental metaphysics since, at least in part, its metaphysical ideas are verifiable not only by private individual experiences but also by experiments in the public arena.²

If you grew up in the West’s still very materialist culture, your worldview very likely is a strange and confused amalgam of materialism (the supremacy of matter) and Cartesian interaction dualism (the spirit world exists as a separate and independent world made of a nonmaterial substance that somehow interacts with the material world). Not so long ago, people tried to prove the existence of soul by attempting (unconvincingly) to show that a body loses weight upon death in violation of the principle of conservation of energy.

Even avowed monistic idealists often fall prey to dualistic soul-talk a la Descartes when discussing death and reincarnation. They talk of establishing the validity of ghosts, apparitions, as objects of the same shared physical reality as a chair or a tree. I see a chair because it reflects light to my eyes. Can a ghost, if it is an other-worldly nonmaterial being, emit a signal or reflect light for my senses to pick up? Obviously not. A most important challenge to our science within consciousness is to recast the discussion of the phenomena related to death and reincarnation from the monistic perspective. This is the challenge I take up in this book. If dualist concepts have to be used, we must find explanations that do not violate the laws of science; we must reconcile these concepts within an overall monistic view. This is what I have been able to accomplish.

²The phrase “experimental metaphysics” was coined by the philosopher Abner Shimony.
The Soul and the Quantum

What survives? Does what survives reincarnate in some way that we may call a true continuum—birth-death-rebirth, on and on? During an intense period of research that lasted about a year, I found my answer. There is a “soul” that survives the death of the physical body, and it does reincarnate in another body to form a continuum. Yes, such soul-talk makes sense in a science based on consciousness, but only when we think of the soul in terms of the “quantum.”

The situation is similar to what happened toward the end of the nineteenth century. Physicists found that thinking of matter and light in the old Newtonian way—namely, matter is always localized, traveling in well-defined trajectories, and light is always wavelike, dispersed, capable of being at more than one place at the same time—gave them anomalies and paradoxes. They discovered a new way of thinking—the quantum way.

The word quantum means “a discrete quantity.” For example, a quantum of light, called a photon, is a discrete, indivisible amount of energy, a localized energy bundle. Recognizing that light has a localized particle nature in addition to its more familiar wave nature and that matter has a wave nature in addition to its more familiar localized particle nature eliminated the anomalies and paradoxes referred to above.

Thus, the significance of the word quantum goes well beyond discreteness. Quantum dynamics gives unexpected, almost magical, potency to objects of the submicroscopic domain.

• What does it mean to say that matter is wave-like and thereby it can be at more than one place at once? If this sounds paradoxical, the paradox is resolved by realizing that the waves of matter are waves of possibility (technically represented by mathematical functions called wave functions); they are at two (or more) places at once only in possibility, only as the superposition of the two (or more) possibilities.
• Quantum objects exist as a superposition of possibilities until our observation brings about actuality from potentiality, one actual, localized event from the many potential events. If a particular possibility has a great probability to actualize, upon observation, there the possibility wave is correspondingly strong; where the wave is weak, the probability is small for its corresponding possibility to actualize.

An example will clarify the situation. Suppose we release an electron in a room. In a matter of moments, the electron wave spreads all over the room. And now suppose we set up a grid of electron detectors, called Geiger counters, in the room. Do all the counters go ticking? No. Only one of the Geiger counters ticks. Conclusion? Before observation, the electron does spread all over space, but only as a wave of possibility. And observation brings about the collapse of the possibility wave into an actual event.

• Quantum mechanics is a probability calculus that enables us to calculate the probability of each possibility that is allowed in every dynamical situation. Probability begets uncertainty. We no longer can know an object’s whereabouts with certainty. The movement of quantum objects is always shrouded with some uncertainty.

• Before quantum physics was properly understood, a materialist metaphysics prevailed in science—elementary particles make atoms, atoms make molecules, molecules make cells including neurons, neurons make the brain, and brain makes consciousness. This theory of causation is called the theory of upward causation: cause moves up from the micro elementary particles all the way to the macro brain and consciousness. There is no causal power in any entity of the world but in the interactions between elementary particles.

But if we ourselves are nothing but material possibilities, how can our observation collapse waves of possibility? The interaction of possibility with possibility only begets more complex possibility, never actuality. So if there were
only upward causation in the world, quantum collapse would be a paradox. In the correct paradox-free interpretation of quantum physics, upward causation is only capable of producing material waves of possibility for (nonmaterial) consciousness to choose from, and consciousness has the ultimate power, called downward causation, to create manifest reality by freely choosing among the possibilities offered. Consciousness no longer is seen as brain epiphenomenon but as the ground of being, in which all material possibilities, including the brain, are embedded.

- Quantum objects can take a discontinuous leap—now it’s here, and then it’s there; such a leap is called a quantum leap. An atom emits light when an electron takes a quantum leap from a higher energy atomic state to a lower one. You can appreciate the radicalness of this quantum leap when you visualize it as the electron jumping from a higher orbit around the atomic nucleus to a lower one without traveling through the space between the orbits.

In the same vein, downward causation is discontinuous in every which way: causally (we cannot assign a precise cause for it), mechanically (we cannot make a mechanical model for it), algorithmically (there is no mathematics for it), and logically (its logic is circular: the observer is essential for collapse to occur, but the observer is only possibility before collapse has taken place).³

- Quantum objects, when suitably correlated, are experimentally found to influence one another nonlocally, that is, without signals through space and without taking a finite time. Thus, correlated quantum objects must be interconnected in

³If you have trouble visualizing a wave in the brain, albeit a wave of possibility, “because waves travel,” realize that waves in a confined space are standing waves; they “wave” while standing at the same place, as in a musical instrument.
a domain that transcends space and time. Nonlocality implies transcendence. It follows that all quantum waves of possibility reside in a domain that transcends space and time; we will call it the domain of transcendent potentia (meaning potentiality), to use Aristotle’s term adapted by Werner Heisenberg.

And don’t think that possibility is less real than actuality; it may be the other way around. What is potential may be more real than what is manifest because potentia exists in a timeless domain whereas any actuality is merely ephemeral: it exists in time. This is the way Easterners think, how mystics all over the world think, and how physicists who heed the message of quantum physics think.

Does the quantum “magic”—being in two places at once, downward causation, quantum leaps, and nonlocal connections—which is so potent and clear in the submicroscopic realm, extend to the macroworld of our experience? The breakthrough idea of recent times is that our brain involves quantum processing in every case of observation which is a quantum measurement. The brain responds to a stimulus by presenting a pool of macroscopically distinguishable quantum possibilities (a possibility wave), one of which precipitates as the experienced event when consciousness so chooses.4

You may already see part of the right metaphor here for the quantum physics of the soul. While the physical body, when alive, represents possibilities which always must manifest as a localized structure that has a finite beginning and a finite end, the soul represents possibilities, potentia without localized structure in manifestation. As transcendent potentia without the fixation of local manifestation in time and space, it

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4The quantum in the brain has been investigated by many authors, among them, Walker (1970); Bass (1975); Stuart, Takahashy, and Umezawa (1978); Stapp (1982, 1993); Wolf (1984); Goswami (1989, 1990, 1993); Herbert (1993); Eccles (1994).
transmigrates (that is, is nonlocally experienced) from one incarnation in one locality and time to another in a different point of space and time.

The concept of soul sheds its Cartesian, dualist paradoxes when we imbue it with quantum dynamics and downward causation, as you will see; and quantum dynamics also gives it an unexpected potency that enables us to see validity in esoteric teachings and to explain anomalous data. There is, of course, the important question of how the soul looked upon as structureless quantum possibilities remembers each of its individualized incarnate life experiences cumulatively, but not to worry. This is the question I have been able to solve and the answer constitutes an important part of this book.

In the Bhagavad Gita, Krishna says to Arjuna, “Both you and I have been reincarnated many times before. I remember, you don’t.” In India, the wise say that liberation brings back the memory of past incarnations and banishes the fear of death. But this way of dealing with the fear of death is arduous, available to only a few people in a given era.

My vision is that a science of reincarnation, firmly in place and grounded in ideas of a transmigrating soul within a new quantum dynamics that is convincing and satisfying (you will see!), will lessen our fear of death. Death will then be accepted as part of life, and we won’t frantically try to deny it. The discovery of deep meaning in the phenomenon of death will also bring meaningfulness in our exploration of life. As we are able to live fully, we will see death as a frame for a creative opportunity, a necessary step to a renewal of life.

Creativity in the Life-Death-Rebirth Cycle

What happens after death? The Chinese philosopher Confucius said:

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\begin{align*}
\text{You want to know of Death?} \\
\text{Well, I shall save my breath.} \\
\text{When you know Life, why then,} \\
\text{We'll talk of Death again.}
\end{align*}
\]
Confucius is right about one thing. Until we die, we have virtually no chance of empirically verifying what happens after death. Today, people report near-death experiences in situations where they “die” briefly in some sense but are revived by restoring the heartbeat or some such thing. Yet these much-touted experiences are, strictly speaking, not experiences of the after-death state.

But do we have to depend on strict empiricism to build a science? Clearly, any conclusions we reach about survival after death and reincarnation will have to depend largely on theory, on intuition or experiential glimpses, and on our own creativity; the help from empirical data will be, at best, secondary. But it will still be science if we can experimentally verify some of its important hypotheses and if it is useful, if it can be used to lay out a procedure for the art of discovering the nature of death and what happens at death.

Is there an art of dying that can be investigated with a science? It sure seems so. The Tibetan spiritual teacher Sogyal Rinpoche (1993) recalls a childhood anecdote. During a journey, a lama was dying. As was customary, an associate wanted to call the Rinpoche, the spiritual guru of the lama. But the lama said that there was no need, he knew what to do. And with that he closed his eyes and died. The associate did, however, fetch the Rinpoche anyway. The Rinpoche took one look at the “dead” lama and said affectionately, “Old lama, don’t stay in that state... sometimes obstacles can arise.” Then, before the eyes of an amazed Sogyal, the lama came back to life. The Rinpoche then guided the lama through the process of conscious dying.

The well-known Tibetan Book of the Dead is a book precisely designed for the guidance of a dying person. Can we develop a science to understand it? No other than the current Dalai Lama himself wrote, “Death and dying provide a meeting

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All references to the Tibetan Book of the Dead are for the Evans-Wentz 1960 translation.
point between the Tibetan Buddhist and modern scientific traditions. I believe both have a great deal to contribute to each other on the level of understanding and of practical benefit.” I concur. This book is an integration of age-old art and modern science, specifically, of the ideas in the Tibetan Book of the Dead and quantum physics.

The approach to death involves both science and art, but neither is completely objective. The literature and what data we have can give you ideas of where to begin your thinking, but you are the boss here. The real significance of this inquiry is to enable you to discover the truth about death yourself.

If so many people’s intuition (and yours, too, perhaps, since you are reading this book) is correct and we do reincarnate, then death is the greatest rite of passage that we ever face. This is why some people go so far as to say that our whole life is a preparation for death. “The answer to human life is not to be found within the limits of [one] human life,” said the psychologist Carl Jung. When we comprehend this in our hearts, we see that death is part of an ultimate creative process.

The creative process has four general stages: preparation, incubation, insight, and manifestation. Preparation is reviewing the known and preparing the groundwork for creative insight. Incubation is unconscious processing—processing without awareness. Whereas preparation is striving, unconscious processing is processing without conscious striving, but it is not sleep either. These two stages are intermingled as alternate striving and relaxing—alternate doing and nondoing, if you will. Insight is the dawning of the new idea, the shift of context. It is a quantum leap of thought—a discontinuous transition in thought without going through the intermediate steps (Goswami 1996, 1999). Manifestation is bringing about the transformation demanded by the insight.

Is life a preparation for death? It would be more correct to say that our whole life comprises the first two stages—preparation and incubation—of the creative discovery of the nature of after-death reality. The moment of death holds the possibility of insight about reality as well as manifestation of the
insight. Consider the possibility that with this insight, depending on the depth of the insight, I (you) can choose what happens after my (your) death—the manifestation of our insight. And if we miss our insight this time, then more unconscious processing, more preparation, until . . .

So by choosing how we die, we decide individually, case by case, what happens after death. Such a scenario changes our entire orientation toward death, doesn’t it?

People say, with some justification, that death is like sleep, that it is a great sleep. I contend that there is also a greater possibility. Some people of advanced spirituality experience sleeplike states called *nirvikalpa samadhi*, in which, although like sleep, there is no subject-object split experience; there is unconscious processing that gives rise to creative insights upon “waking” up. So it is your choice. Do you want to die to enter a great sleep so when you “wake” up in the next incarnation you are virtually the same as before? Or can you die to enter a great *samadhi* so that when you find yourself in the next incarnation, there is a new you—the result of a creative insight?

**From Death to Immortality**

People often wonder about the meaning of life, especially about the meaning of their own life. In the reincarnational schema, we begin to get a glimpse of the answers to the questions of meaning. These questions are about ourselves, our self-nature, and, generally speaking, about the nature of our consciousness. First we explore these questions in the outer arena; this constitutes our materialist phase. Upon many incarnations, when answers don’t come that way, we turn inward. In the beginning, the inward journey is very tentative and much tainted by the habit patterns we acquire from the outer journey. But gradually, understanding begins to dawn. And then suddenly the final understanding, we have no more questions, and we are liberated. Now we are outside the birth-death-rebirth cycle; we are immortal. If the final understanding happens during our life, when we die this time, we won’t
come back. If the understanding happens at the moment of death, then also we won't come back; it will be our final death.

In one of the *Upanishads* of India, there is a hymn:

*Take me from the unreal to the real*
*Take me from darkness to the light*
*Take me from death to immortality.*

Liberation is the immortality referred to in this hymn. In developing a scientific theory of reincarnation, this is one kind of immortality that we must explore.

But many people, today and in the past, think of immortality in an altogether different vein—immortality in the physical body, acquiring a physical body that never dies. There is also one of the foundational features of Christianity—Jesus' resurrection. How do we interpret resurrection? Obviously, the most straightforward interpretation would be resurrection in a (immortal?) physical body. Can the idea of physical immortality or resurrection after death in an immortal physical body be supported by science? Can this kind of question even be entertained by science?

The answer from this author is, yes, although the reasoning will border on speculation. But imagine the distance we have come in science. Not so long ago, even consciousness was considered the “hard” question of science. But when we do science within the primacy of consciousness, science finds new clarity and power (the power of downward causation), and with this added power, new answers can be sought and found. You will see.