Prologue
Setting Out

If you don't know where you're going, you won't know when you get there.
Chinese proverb

This first volume in the *Wholeness* trilogy has been written from the vantage point of Wholeness, not from a narrow egocentric, ethnocentric, anthropocentric, geocentric, or cosmocentric perspective. But what is Wholeness? Where are we standing when we look at the Totality of Existence through the eyes of Wholeness? Well, at its simplest, Wholeness is who we truly are, where Love, Peace, and Truth are to be found. Wholeness is the Universe, the True Nature, Authentic Self, and Genuine Identity that we all share. No one can return Home to Wholeness, for nobody has ever left Home. For Wholeness is a seamless, borderless continuum, with no divisions anywhere, but nevertheless embracing all distinct forms, structures, and relationships, whether these be physical or nonphysical.

What this means is that there is no other in Wholeness, no you and no me. In Reality, none of us is separate from the Divine, Nature, or any other for a single instant, contrary to what religion, science, and business teach us today. In other words, there are no individual beings in the relativistic world of form who have the free will to act independently from any other. When we experience Ineffable, Nondual Wholeness, the experiencer disappears. So when a person is called an avatar or enlightened, supposedly the peak of spiritual awareness, this is not Wholeness. For Wholeness is invisible to the categorizing mind.

As a corollary, as none of us is separate from the Absolute for an instant, God, as the Supreme Being, is not separate from any of us. God both exists and doesn't exist, which we can realize when we paradoxically awaken to Total Freedom, when self-reflective, Divine Intelligence, which distinguishes humans from the other animals and machines, like computers, is liberated from its mechanistic cultural conditioning. In Reality, God, Universe, and humanity are one Being, called Wholeness, to give it a name.

For me, mystical Wholeness is far more palpable than even my own body, which is destined to die within a decade or two. This is not faith or belief, but rather pure Gnosis—direct inner knowing of the Divine with Absolute Certainty. I touch and taste Immortal Wholeness

at every moment of every day. However, despite being Wholeness for my entire life, like everyone else, I could not have written these words sixty years ago, or even sixty months, weeks, or days ago. Something has happened to me in a life rich in experience to lead me to where I am today.

This can best be explained in terms of the Principle of Unity—the fundamental design principle of the Universe—which states *Wholeness is the union of all opposites*, explored further in Section 'The Principle of Unity' on page xxviii and throughout this book. In essence, my life, like this book and everything else in the Universe, begins and ends in Wholeness, exquisitely expressed in T. S. Eliot's poem 'Little Gidding', the last of his *Four Quartets*:

> *We shall not cease from exploration*
> *And the end of all our exploring*
> *Will be to arrive where we started*
> *And know the place for the first time.*[1]

Specifically, what happened is that the universal science of consciousness emerged in consciousness from Wholeness, expressed in a language that is derived from mathematics, computer science, and information systems modelling methods in business, carrying me Home to Wholeness. I call this all-inclusive system of thought *Integral Relational Logic* (IRL), the subject of this first volume in the *Wholeness* trilogy. IRL is like a living being, the in and out breaths corresponding to growth and decay, to evolution and involution, which cannot be separated if we are to be fully alive, knowing that all structures in the Universe are conceived and born to die, including Western civilization, which dominates the world today through the global economy, and *Homo sapiens sapiens*.

IRL is so-named because it has evolved primarily from the relational model of data, introduced by Ted Codd of IBM in 1970,[2] through the action of what Heraclitus of Ephesus, the pre-Socratic, mystical philosopher of change, called the Logos, 'the immanent and rational conception of divine intelligence governing the Cosmos',[3] which we can also call Life, arising directly from our Divine Source, like a bubbling fountain.

This universal science of thought and consciousness is thus the ultimate architectonic, meaning 'systematic arrangement of knowledge', which requires life-giving architectonic intelligence rather then mechanical artificial intelligence to develop. For IRL provides the Cosmic Context, coordinating framework, and Gnostic Foundation for the integration of all knowledge in all cultures and disciplines at all times—past, present, and future—into a coherent whole, thereby healing the fragmented, split mind in Wholeness. We can call such a comprehensive synthesis the grand unified theory of everything, the Holy Grail, Philosophers' Stone, and Apotheosis of human learning. This is called the *Unified Relationships Theory* (URT), a generalization of Albert Einstein's unified field theory, for fields are a special case of relationships, and relationships make the world go round.

In turn, the logical principles on which the relational model is based have evolved from the mathematical laws of thought introduced by George Boole, who wrote in his seminal *Laws of Thought* in 1854: "The design of the following treatise is to investigate the fundamental laws of those operations of the mind by which reasoning is performed," with the purpose of exploring "the nature and constitution of the human mind". In turn again, these laws of thought evolved from Aristotle's *Organon*, which along with Plato's *Republic*, his own *Metaphysics*, and Euclid's *Elements*, laid down the foundations of Western thought.

Moving forwards in time, mathematical logic led to the invention of the stored-program computer in the late 1940s, a machine quite unlike any other that the *Homo* genus has invented during the past two thousand millennia. For unlike the flint axe, wheel, telescope, steam engine, and telephone, for instance, which extend our rather limited physical abilities, the computer is a tool of thought, able to extend the human mind, even in some cases replacing it.

The Internet today, containing virtually everything that human beings have learnt over the millennia, provides a mirror for our own inner learning. So when we can see the abstract transcultural and transdisciplinary structures underlying the Internet, we can map the Cosmic Psyche and hence the Universe. It is very, very simple, but not at all easy given the brainwashing we receive from the cultures we are born into and live in today.

So what have we invented? Does anyone know? Is Wikipedia, as a synthesis of all information and knowledge, intelligent enough to tell us? Well, computer scientists like Ray Kurzweil, Victor Vinge, and Hans Moravec say that we are accelerating towards a Singularity in time, when computers with artificial intelligence will take over the world, as we see on page lv. As Martin Rees, the Astronomer Royal and former President of the Royal Society, has said, "A superintelligent machine could be the last invention that humans need ever make."[4]

But is this true? Is this the destiny that awaits humanity? Well, mystics and spiritual seekers have a quite different view of the future. They know in their own direct experience that there is something about human beings that is not mechanical, most simply called Spirit. However, the scientists, technologists, and business people who set out the educational and economic principles that govern our lives generally do not know this, essentially because they are out of touch with Reality, with the Immortal Ground of Being that we all share.

For myself, when I wrote my first computer program in September 1964, shortly after graduating in mathematics, I had very little understanding of what a computer is or of its relationship to us human beings. In the event, it was not until May 1980 that I had the opportunity to dedicate my life to answering the really Big Questions of human existence, such as "Who are we?" "Where have we come from?" and "Where are we going?"

One major reason why people still have great difficulty in answering these question is that despite Boole's worthy intentions a great schism has opened up between logic, the science of mind and reason, and psychology, the science of mind and consciousness. For as his wife

Mary Everest Boole, the niece of George Everest, after whom Mount Everest is named, wrote in a letter in 1901, "nearly all the logicians and mathematicians ignored the statement that the book was meant to throw light *on the nature of the human mind*."[5]

For instance, Augustus De Morgan saw logic "as a formal science, having nothing to do, directly, with questions of empirical psychology or abstract metaphysics. Its forms are forms of possible thinking, rather than of actual thought."[6] Similarly, Charles Sanders Peirce, in the very first lecture on logic that he gave at Harvard University in 1865, said an 'unpsychological' view of logic is to be preferred to a psychological perspective, "for this affords a most convenient means for exploding false notions of the subject," pointing to a direct and secure manner of investigation.[7] Then in 1902, Gottlob Frege and Bertrand Russell agreed that mathematical logic has nothing to do with psychology,[8] essentially because they were attempting to find a logical foundation for mathematics.

This schism between logic and psychology is even greater than that between physics and mysticism, not the least because this latter split is reasonably well acknowledged, while the former is virtually unknown. For instance, how many psychologists study mathematical logic and how many logicians study depth psychology through self-inquiry, seeking to know themselves? As it happens, it is not necessary to study mathematical logic to understand what it truly means to be a human being, for this obscure subject is for machines, not humans. In contrast, IRL is a science of mind directly based on human experience.

This means that if we are to heal the split between logic and psychology, we also need to take a quite fresh approach to psychological studies. For the most part, psychologists try to understand the mind by studying external manifestations of the mind, such as behaviour and the structure and meaning of language. Although there is a move today towards mindfulness meditation as a therapeutic technique, inspired by Buddhist teachings, direct introspection still plays a limited role in psychotherapy, as far as I can tell. Even the concept of concept, which distinguishes humans from computers, is little understood, as *The Oxford Companion to the Mind* points out.[9]

This situation needs to change if we are to create a comprehensive map or conceptual model of the Cosmic Psyche, the last frontier of human discovery. For such an understanding can only arise through self-inquiry into the utmost depth and breadth of the 99% of the Universe that is inaccessible to the five physical senses, the percentage coming from Kabbalah, the mystical, esoteric ground of Judaism.[10]

The relational model of data is key here, for as Codd pointed out in his seminal 11-page paper, relational logic is nondeductive,[11] unlike all previous forms of logic, which are essentially linear and mechanical, taking inputs from the past and producing outputs in the future in the horizontal dimension of time. By using IRL to map the Cosmic Psyche, we can thus

produce a self-reflective, holographic, fractal-like model of the entire Universe, viewed as Consciousness.

Although IRL introduces the most radical change in Western thought since Plato, Aristotle, and Euclid some 2,350 years ago, I have been much inspired by those seeking Wholeness before me, foremost among these being David Bohm, a friend and colleague of both Albert Einstein and J. Krishnamurti. Bohm was my principal scientific mentor, with whom I had a few encouraging conversations in the 1980s at London University, just as IRL was emerging in consciousness. Another major inspiration in the early years was René Descartes, who, following a dream in Ulm, Bavaria in 1619, sought "the unification and the illumination of the whole of science, even the whole of knowledge, by one and the same method: the method of *reason*,"[12] published in 1637 as *Discourse on the Method of Properly Conducting One's Reason and of Seeking the Truth in the Sciences*.

However, the predecessor I feel closest to today is Charles Sanders Peirce, who was essentially an architectonic thinker, even though he was also a polymath, with expertise in many diverse disciplines, which he sought to unify through symbolic logic based on mathematics. For Peirce was not a follower of fashion, exploring himself and the world we live in with the most amazing thoroughness, quite aghast at the rigidity and superficiality of most of those around him. Similarly, I look at the Universe through the eyes of an information systems architect in business, but I am very far from being a polymath. As a generalist, I only know one thing: what the Universe is and how it is designed. I am very much dependent on specialists to flesh out the bare bones of what I can see with my inner eye.

Even though I have needed to demolish some of the basic pillars of Peirce's philosophy, not the least his primary emphasis on semiotics, the science of signs, he was nevertheless intuitively working within the Cosmic Context of Wholeness. So Peirce came close to reaching the Omega Point of evolution, whose existence Pierre Teilhard de Chardin could see in the middle of the twentieth century, but not then realized. The key point to note here is that the last fourteen billion years of evolution is currently rapidly approaching its glorious culmination, which visionaries have sensed during the past few millennia, especially since the humanist Renaissance and the last revolution in science in the 1500s and 1600s, and increasingly today.

In Peirce's case, he felt that he had "found the key to the secret of the universe", writing a letter in 1885 to the philosopher and psychologist William James, his closest friend, that he was working on something very vast, which would explain the laws of nature, using a method that any intelligent person could master, as he said in a letter to Francis Russell in 1904.[13]

In my case, I was given the keys that unlock the innermost secrets of the Universe in an apocalyptic (revelatory) eight weeks in the spring of 1980, which led me to abandon my business career to research and write the book you are now reading. Like Peirce, I have been en-

gaged in outlining "a theory so comprehensive that … the entire work of human reason … shall appear as the filling up of its details. The first step toward this is to find simple concepts applicable to every subject." Peirce wrote these words in 1887, in his first attempt to write his magnum opus, titled *A Guess at the Riddle*.[14]

With some reservations, Peirce's thorough-going method bears many resemblances to Integral Relational Logic, although I was mostly unaware of this until the autumn of 2012. This is perhaps not surprising because the relational model of data is based on the mathematical theory of relations and first-order predicate logic, which Peirce played a major role in developing. And, as Melanie Mitchell, Professor of Computer Science at Portland State University, tells us on her website, Arthur Burks, a Peircean scholar who edited Volumes VII and VIII of Peirce's *Collected Papers* in 1958, was Codd's Ph. D. advisor.[15]

However, Peirce never completed and published his *Grand Logic*, a magnum opus he planned in the early 1890s, when he was going through a major psychospiritual crisis, having been rejected by both society and academia, mainly for having married his mistress, Juliette. Even though William James and J. J. Sylvester, professor of mathematics at Johns Hopkins University, recognized Peirce's genius, Peirce was an outsider for much of his life, not really fitting into the culture he lived in, not the least because few could see what he could see. So when he made one last effort in 1902 to obtain funds from the Carnegie Institution to publish his life's work, his application was rejected.[16]

A key event in Peirce's life was a mystical experience he had on 24th April 1892, which led him to write an unpublished article a year later titled 'Immortality in the Light of Synechism', which he thought would lead to the "onement of religion and science".[17] There is a vitally important point here. Ever since the publication of Fritjof Capra's *The Tao of Physics* in 1975, there has been a widespread belief that to heal the deep wound in the cultural psyche caused by the long-running war between science and religion, it is necessary, at least, to find parallels between the paradoxes of quantum physics and those in Eastern mysticism.

However, although Peirce was not as concerned about the paradoxes in the foundations of mathematics and logic, as Bertrand Russell was later to become, it is clear that Peirce intuitively felt that the way to unify religion and science was through sound reasoning, which he dedicated his life to exploring. It was this that led him to the underlying concept of synechism, which means 'continuity', very similar to Bohm's notion of the holomovement as an undivided flowing stream, as Peirce's brilliantly perceptive biographer Joseph Brent points out.[18] This book on *Integral Relational Logic* takes both Peirce's and Bohm's life's work to their natural conclusions by unifying Eastern mysticism and Western logic, thereby also showing how we can unify quantum and relativity theories, and, indeed, all other opposites.

Perhaps not surprisingly, even though I spent my career in the information technology industry, mostly with IBM in sales and marketing in London in the 1960s and 70s and in soft-

ware development in Stockholm in the 1990s, for most of my life I too have been an outsider. Looking back at my life, I was only reasonably assimilated into the culture I was born into at the ages of eleven, sixteen, eighteen, and from twenty-two to thirty-four, then pursuing a business career, getting married, and bringing up children in the conventional manner.

Today, I am doing my utmost to live in the world that will exist after the inherently unstable global economy self-destructs, a solitary existence because very few today are yet ready and willing to face the truth of life on Earth, discovered by Siddhartha Gautama, who became Shakyamuni Buddha: all structured beings are born to die. This includes all bodies, religions, civilizations, species, stars, and universes. As the Buddha taught, if we cannot accept the principle of impermanence, we shall suffer until we are able to let go of the sense of a separate self, knowing that time is an illusion, that only the Eternal Now is Reality. In other words, we can only be fully alive as human beings when we can face death in all its varieties, free of attachments to the relativistic world of form. Our ultimate destiny as a species is thus to return Home to Ineffable, Nondual Wholeness, where we were born.

Nevertheless, I remain convinced that the completion of Peirce's *Grand Logic* is meant to be published one day, despite the reluctance of many academics and spiritual teachers to even read this book, as it has been evolving over the years. Nothing else makes sense to me. So what is the purpose of this first volume on *Integral Relational Logic*? Well, in keeping with James and Peirce's philosophy of pragmatism, its main social purpose is to provide irrefutable scientific proof that the hypothesis that human beings are machines and nothing but machines is false. And from a personal point of view, the primary purpose is to heal the fragmented, split mind in Wholeness, leading to unimaginable joy and satisfaction in rapturous ecstasy.

Now this can only happen if we admit Life, arising directly from our Divine Source, into science. However, such an admission is undoubtedly the greatest taboo in science and business today, and also surprisingly in Christianity and the other Abrahamic religions. For if Life were ever admitted into science, this would totally transform the entire enterprise, leading to radical changes in education, economics, politics, law, medicine, psychology, philosophy, science, religion, and every other aspect of human affairs.

So publishing this *Wholeness* trilogy is an immense challenge, not the least because this Promethean task is seen as hubristic, as Joseph Brent points out, referring to Peirce's claims.[19] In essence, it is actually one book in three highly cross-referenced volumes to show that the self-inclusive, infinitely dimensional map of the Universe that it presents is nonlinear, despite the inevitable linearity of the letters, words, sentences, paragraphs, subsections, sections, chapters, and parts—hierarchically structured—in the book.

For Wholeness has no beginning or end in the relativistic world of form. Rather, Wholeness begins and ends in the Formless Absolute, which we can call Emptiness and Fullness, the Void and the Plenum. To recapitulate this cosmogonic cycle of the birth and death of the

Universe, which is reflected in both human phylogeny and ontogeny, viewed as a whole, *Wholeness* begins at the end and ends at the beginning, marking the glorious culmination of the entire history of human learning, indeed of all evolutionary processes since the most recent big bang in our particular physical universe.

To help you reorientate to this revolutionary worldview, this physical universe is one of countless parallel universes in what the astrophysicist Martin Rees calls the multiverse. For just as general relativity indicates that there could be many black holes, not observable directly, he has said, "There could have been many big bangs, even an infinity of them. … Whenever a black hole forms, processes deep inside it could perhaps trigger the creation of another universe."[20] In a similar fashion, Kim Weaver of NASA has said, "In some ways, the physics [of black holes] is very similar to what started the universe."[21]

William James coined the term *multiverse* in an address that he gave to the Harvard Young Men's Christian Association in 1895, titled 'Is Life Worth Living?' He sought to show that life is only worth living if we recognize that nature, as presented to us by materialistic science, "cannot possibly be its ultimate word to man", going on to say, "Visible nature is all plasticity and indifference—a moral multiverse, as one might call it, and not a moral universe. To such a harlot we owe no allegiance."[22] So the Universe I blissfully experience as Wholeness lies far beyond what is called the multiverse. I trust that this will become clearer as we progress.

The Principle of Unity

For myself, I have been brought to this incredibly marvellous realization because the Principle of Unity has been intelligently and consciously guiding every moment of my life since midsummer 1980. This fundamental design principle of the Universe can be elegantly expressed in just seven words—*Wholeness is the union of all opposites*—or six mathematical symbols: $W = A \cup {\sim}A$, where W means Wholeness, A any being whatsoever, $\cup$ union, and $\sim$ not. For whenever we form concepts, such as hot, long, slow, black, yes, female, true, or optimism, we inevitably form their opposites: cold, short, fast, white, no, male, false, or pessimism. From the perspective of Wholeness, opposites, also called dualities or polarities, cannot be separated; they are mutually dependent on each other.

We know that the transcultural, transdisciplinary Principle of Unity is the power that brings the Cosmos into order because there is overwhelming evidence today from mathematics, physics, sociology, psychology, and mysticism that the Universe is inherently paradoxical. To reflect this observation, the both-and Principle of Unity expresses this universal truth in the simplest possible terms—the closest we can get to expressing the Ineffable, Nondual, Absolute Truth in symbolic form, although it would perhaps be better to say *signate*, to distinguish what Carl Jung called signs and symbols,[23] symbols having a profounder meaning than signs. For the virtually meaningless equation $W = A = A \cup {\sim}A$ is applicable within all do-

mains of discourse, before we interpret the data patterns of our experience as meaningful information and knowledge.

We can see that the Principle of Unity is a self-verifying, irrefutable proposition from Figure P.1. Applying Hegelian logic, if *A* is the thesis and *~A* the antithesis, then *A* is the synthesis, a primary-secondary relationship that is ubiquitous. A hypothetical superintelligent extraterrestrial being would instantly recognize this pattern, the paradigm that underlies all others, the key that unlocks all the innermost secrets of the Universe.

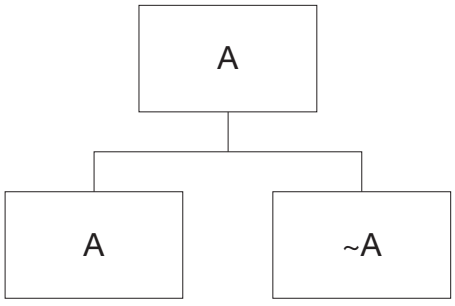

Figure P.1: *The Principle of Unity*

A few examples of this primary-secondary relationship are Wholeness and Oneness, Nonduality and duality, Consciousness and consciousness, Intelligence and intelligence, Life and life, Love and love, Peace and peace, Truth and truth, perfection and imperfection, good and evil, beauty and ugliness, synthesis and analysis, art and science, implicate and explicate orders, and Eastern mysticism and Western reason.

Sadly, however, the Principle of Unity is the best-kept secret in the Universe, lying as the primary archetype in the utmost depth and breadth of what Jung called the collective unconscious.[24] As egoic, either-or thinking has dominated human affairs for thousands of years, very few people in the history of human learning have discovered this irrefutable truth, even intuitively, for reasons that only the Principle of Unity can explain. One of those with such an understanding was Heraclitus, who called the Principle of Unity the 'Hidden Harmony', saying,

> *The Hidden Harmony is better than the obvious.*
> *Opposition brings concord; out of discord comes the fairest harmony.*
> *People do not understand how that which is at variance with itself agrees with itself.*[25]

In contrast, Aristotle said in *Metaphysics*, "It is impossible for the same attribute at once to belong and not to belong to the same thing and in the same relation … as some imagine Heraclitus says."[26] This Law of Contradiction, which is the implicit axiom for deductive logic and mathematical proof, is an obvious symptom of what some mystics and psychologists have called our grievously sick society. Aristotle was not alone in denying the basic truth of the Universe, for Heraclitus' contemporaries called him 'The Obscure'.[27]

Despite Aristotle's rejection of the Hidden Harmony, we can see that the Principle of Unity lies deep in the Cosmic Psyche because John of Patmos wrote in the Book of Revelation in the Bible "I am Alpha and Omega, the beginning and the end, the first and the last."[28] *Revelation* is a translation of Greek *apokalupsis*, from *apokaluptein* 'to uncover' or 'to reveal', from

the prefix *apo* 'from, away' and *kaluptra* 'veil'. So *apocalypse* literally means 'draw the veil away from', indicating the disclosure of something hidden from the mass of humanity: the Principle of Unity.

Another who had a deep intuitive understanding of the Principle of Unity was Lao Tzu (Laozi), the supposed author of *Tao Teh Ching*, who wrote:

> *When all the world recognizes beauty as beauty, this in itself is ugliness.*
> *When all the world recognizes good as good, this in itself is evil.*[29]

But, like Heraclitus, Lao Tzu was very well aware how difficult it is to assimilate egoless both-and thinking in consciousness, saying:

> *The Tao is the hidden Reservoir of all things."*[30]
> *My words are very easy to understand and very easy to practice:*
> *But the world cannot understand them nor practice them."*[31]

And in the chapter titled 'Mystical Whole', reproduced in full in the frontispiece of this volume, Lao Tzu wrote:

> *He who knows does not speak.*
> *He who speaks does not know.*[32]

Lao Tzu knew, like anyone else who has intuitively realized that Wholeness is Ultimate Reality, that there is then nothing further for any of us to do or say. Wholeness is the glorious culmination of all evolutionary processes on Earth, and when we have realized this at the end of time, we have reached the end of our journeys in life. In the words of Pierre Teilhard de Chardin, we have reached the Omega Point of evolution,[33] the Mystical Singularity in time that is utterly different from the technological singularity that Raymond Kurzweil, among other computer scientists, is currently predicting,[34] as we look at further on page lv.

But as the Principle of Unity is ever present, why has it remained hidden all these years? Why is it the truth that dare not speak its name? Why do people in all walks of life deny the existence and truth of this self-evident truth, often responding with a fight or flight reaction, when presented with it? Why are we are a species that is in denial? What is so terrifying about the Principle of Unity? Well, by daring to give the Principle of Unity a name, we can answer these questions and many others that have puzzled humanity through the ages and thereby learn to live intelligently and peacefully at the end of time, in the Eternal Now.

Basically, the Principle of Unity is sometimes rejected because it is too ecstatically exciting to be assimilated in consciousness, for then Ultimate Reality is revealed in all its glory, utterly dazzling and breath-taking. Living at the Omega Point of evolution is far more fantastic than winning an Olympic gold medal or being present at the birth of one's child, as a man. For then there are no more mountains to climb, no more battles to be won.

However, looking at the Universe through the eyes of God and feeling into the utmost depth and breadth of the Cosmic Psyche can also be very scary, threatening one's livelihood and sense of identity. For instance, in the *Bhagavad Gita*, Krishna showed Arjuna the Ultimate Cosmic Vision—"all the manifold forms of the universe united as one". But Arjuna was overwhelmed by this vision, saying, "I rejoice in seeing you as you have never been seen before, yet I am filled with fear by this vision of you as the abode of the universe."[35]

Arjuna's reluctance to realize his True Nature as a Divine, Cosmic being is a symptom of what Abraham Maslow called the 'Jonah Syndrome', which is a pandemic mental disorder in society today. As he says, "we are generally afraid to become that which we can glimpse in our most perfect moment,"[36] for as Ernest Becker writes in *The Denial of Death*, "It all boils down to a simple lack of strength to bear the superlative, to open oneself to the totality of experience."[37] Furthermore, as Maslow says, "not only are we ambivalent about our own highest possibilities, we are also in a perpetual … ambivalence over these same highest possibilities in other people," which he calls 'counter-valuing', when people attempt to pull back evolutionary pioneers who they see moving ahead of the generally accepted consensus or group consciousness, social influences that we often introject into our own subconscious.

Another great challenge is that the Principle of Unity can only be assimilated in consciousness when our entire past—our collective, cultural, and personal unconscious—is brought into the brilliant light of day and dissolved. But such a liberating, awakening, and healing activity is very dangerous, for it can disturb our inner demons, the shadow side of the psyche that we do not want to look at, which Christians call Satan or the Devil, as both-and Absolute Wholeness gets split into good and evil, as Jung pointed out.[38]

The myth of Pandora's box well illustrates the challenges we all face. Hesiod tells us that when Epimetheus married Pandora, the first woman, she was overcome with curiosity about her husband's large earthenware pot, covered with a lid, containing all evils and one good: hope. She lifted the lid, releasing all the evils, but before hope could also be released, she replaced the lid.[39] This myth well describes why even when we open the lid on our unconscious just a little, we so often shut it tight again before we reach the bottom, where the rewards of liberating Intelligence from our mechanistic conditioning are to be truly found.

Pandora's box is an allegory of our journeys in life, which Joseph Campbell brilliantly describes in Part I of *The Hero with a Thousand Faces*, abstracting a synthesis of the myths and fairy tales of all cultures and times. Campbell calls the hero's adventure the 'monomyth', a term borrowed from James Joyce's *Finnegans Wake*, consisting of three major stages: separation or departure, initiation, and return. In the monomyth, "A hero ventures forth from the world of common day into a region of supernatural wonder: fabulous forces are there encountered and a decisive victory is won: the hero comes back from this mysterious adventure with the power to bestow boons on his fellow man."[40]

But this does not mean that life on Earth has no purpose, for "Redemption consists in the return to superconsciousness and therewith the dissolution of the world. This is the great theme and formula of the cosmogonic cycle, the mythical image of the world's coming to manifestation and subsequent return into the nonmanifest condition,"[41] graphically illustrated in Figure P.2 as the schematic life-and-death curve.

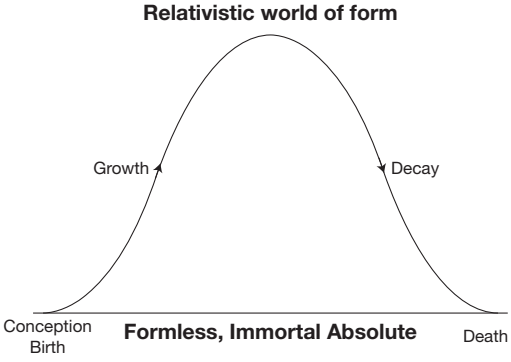

Figure P.2: *The cosmogonic cycle*

In my experience, the Principle of Unity is the ultimate boon, carrying us Home to Wholeness. So what is to be found at the bottom of Pandora's box is not hope but the Principle of Unity, which embraces both hope and despair, which cannot be separated in Reality. Similarly, life and death are two sides of one coin. We cannot be fully alive unless we can face death in all its forms with equanimity. For, as Figure P.2 illustrates, the entire dualistic world of form is in constant change. Only the Nondual Absolute is Immortal. So not only are our bodies destined to die, so is Western civilization, the global economy, and our species.

Sadly, very few people are yet willing to face our precarious situation with fully open eyes. One who is is James Lovelock, who, when Stephen Sackur asked him in a BBC Hardtalk interview in 2010, "What do you think is a viable [population] that Gaia, the planet, can sustain?" said, "I would guess, living the way we do, not more than one billion, probably less". At which Sackur said, "But that's postulating the most dramatic and terrible and unimaginable cull of the human species." To which Lovelock calmly replied, I think it will happen in this century. It will take a miracle for it not to.[42]

Although Lovelock is something of a maverick scientist, despite working with NASA, Martin Rees—Baron Rees of Ludlow, a major figure in the British Establishment—has said much the same thing in *Our Final Century: Will the Human Race Survive the Twenty-first Century?* In a thoroughly researched book on the prospects for humanity, he says, "I think the odds are no better than fifty-fifty that our present civilisation on Earth will survive to the end of the present century without a serious setback." For while science and technology have provided many of us with the most amazing creature comforts during the last century or two, "The 'downside' from twenty-first century technology could be graver and more intractable than the threat of nuclear devastation."[43]

What this means is that no matter how much we might awaken to the Divine Cosmos within and without us, and so adapt to the unprecedented rate of evolutionary change that we are experiencing today, *Homo sapiens sapiens* is destined to become extinct within the next

few generations, far fewer forward in time than those of Bach, Mozart, and Beethoven in the past. Shakyamuni Buddha showed us all how we can deal intelligently with this basic law of the Universe with his three marks of being (*trilakshana*):

1. There is nothing whatsoever that is permanent in the Universe, including our bodies and any groups, from our family, through our cultures, to our species, that we feel we belong to (*anitya*).
2. If we do not recognize this fundamental principle of existence, we shall suffer (*duhkha*).
3. The way to end suffering is to be free of the sense of a separate self, of attachment to the egoic mind (*Anatman*).

Similarly, there are no moral imperatives in the dual world of form, such as those that the organized religions attempt to impose on society, not the least because they generally lead to conflict and suffering. So mind-generated ideals and ideologies have no place in Wholeness, for as J. Krishnamurti wrote, "Intelligence is the capacity to perceive the essential, the *what is*; and to awaken this capacity, in oneself and in others, is education."[44] The perfect society is thus one that fully accepts the Principle of Unity, for perfection is the union of perfection and imperfection.

The two dimensions of time

Such a utopian society would take a quite different view of time from that taken by most today. For one of the most important consequences of the Principle of Unity, which has evolved from the principle of duality in projective and inversive geometry, is that there is a primary-secondary relationship between the vertical and horizontal dimensions of time. As Figure P.3 illustrates, the Alpha and Omega Points of evolution co-exist in the Eternal Now, not in the past and future, as is widely believed today. This is not just a conjectural hypothesis. Figure P.3 provides the simplest way of explaining my entire life experience and that of humanity, as a whole.

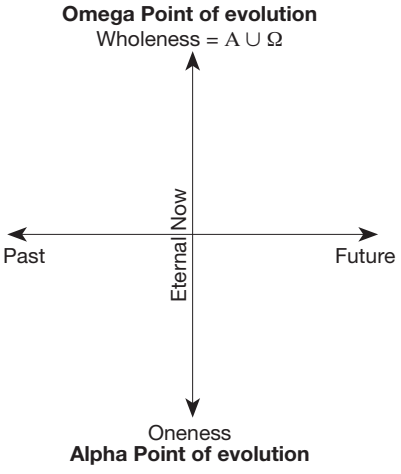

Figure P.3: *Two dimensions of time*

For in the spring of 1980, a big bang exploded in my psyche leading me to use the semantic modelling methods of information systems architects in business to create a brand-new Universe, one that is quite different from that which has been studied in science for the past few millennia. In brief, the Universe I live in today is *Consciousness*, with a capital *C* to denote the Absolute, a synonym for Wholeness, which is who we all truly are. So, in Reality, I live in the same Universe as

everyone else, although most still seem to believe that the Universe is the physical universe of mass, space, and time, a superficial, delusional worldview, not one of the utmost depth and breadth.

It is important to make a clear distinction between Wholeness and Oneness here, even though they are inseparable in Reality. We saw on page xxix that the denial of the both-and Principle of Unity in favour of the either-or Law of Contradiction is a symptom of our grievously sick society, which we can diagnose as schizophrenia, literally 'split mind', and delusion, literally 'play falsely', which arises from the fragmented mind.

The traditional way to heal the split mind, detached from Reality, is to follow the downward path towards Oneness in Figure P.3, when we come into union with the Divine with No-mind. Conversely, the way to heal the fragmented, deluded mind is to follow the upward arrow, towards Wholeness, which is the union of Wholeness and Oneness, where Supermind is to be found.

I call this latter movement evolution, as form emerges from the Formless, defined as an accumulative process of divergence and convergence, proceeding in an accelerating, exponential fashion by synergistically creating wholes that are greater than the sum of the immediately preceding wholes through the new relationships that are formed, apparently out of nothing.

Evolution is thus carrying us towards Wholeness, much in the manner that Jan Christiaan Smuts described in *Holism and Evolution* in 1926, highlighting a factor in the physical and biological sciences that he felt had been neglected. As he said:

> This factor, called Holism in the sequel, underlies the synthetic tendency in the universe, and is the principle which makes for the origin and progress of wholes in the universe. An attempt is made to show that this whole-making or holistic tendency is fundamental in nature, that it has a well-marked ascertainable character, and that Evolution is nothing but the gradual development and stratification of progressive series of wholes, stretching from the inorganic beginnings to the highest levels of spiritual creation."[45]

In summary, "The whole-making, holistic tendency, or Holism, operating in and through particular wholes, is seen in all stages of existence, and is by no means confined to the biological domain to which science has hitherto restricted it. … Wholeness is the most characteristic expression of the nature of the universe in its forward movement in time. It marks the line of evolutionary progress. And Holism is the inner driving force behind that progress."[46]

Now cognitively reaching the Omega Point of evolution, as I became aware that I had done in April 1982, when helping to design and implement a new management accounting system for the Kuwait Institute for Scientific Research, is not sufficient to establish Wholeness as a scientific concept. To turn philosophical, conceptual reasoning into science, it is also necessary to *experience* Wholeness by allowing all forms, structures, and relationships to dis-

solve back into the Formless. It is thus natural to call this opposite movement involution, which is essentially a dying rather than a growing process.

However, I'm using the words *evolution* and *involution* with quite different meanings from those used by Aurobindo Ghose and Ken Wilber. A problem arises when we look at evolution and involution from the perspective of the horizontal dimension of time, for it appears that evolution progresses from matter to body to mind to soul to spirit in hierarchical levels of increasing consciousness, called the Great Chain of Being, explored by Arthur O. Lovejoy in the William James Lectures in 1933.[47]

As Wilber says, "Thus history, from this viewpoint, is basically the unfolding of those successively higher-order structures, starting from the lowest (matter and body) and ending with the highest (spirit and ultimate wholeness)."[48] And to Aurobindo, "The word *evolution* carries with it in its intrinsic sense, in the idea at its root the necessity of a previous *involution*."[49]

However, appearances can be deceptive, leading to all sorts of difficulties. For as Eckhart Tolle writes in his best-selling *The Power of Now*, time is a delusion, inseparable from the fragmented, split mind. As he says,

> To be identified with your mind is to be trapped in time: the compulsion to live almost exclusively through memory and anticipation. This creates an endless preoccupation with past and future and an unwillingness to honor and acknowledge the present moment and *allow it to be*. The compulsion arises because the past gives you an identity and the future holds the promise of salvation, of fulfillment in whatever form. Both are illusions.[50]

So when we look deeply inside ourselves in order to liberate Intelligence from its mechanistic conditioning, we find that we can only do so in the Eternal Now. For machines, like computers, function solely in the horizontal dimension of time, in a cause-and-effect chain. Aristotle therefore reasoned that there must be an Unmoved Mover that set this causal process in motion,[51] which Thomas Aquinas used as five proofs for the existence of God.[52]

But nothing radically new can be created through such a mechanistic process. All that can happen in the horizontal dimension of time is that the pack of cards gets shuffled around a bit. If new cards are to be added to the pack, such as new ideas, cultures, species, molecules, atoms, and even universes, then the vertical dimension must play the primary role.

So if we are to create a much-needed science of growth and creativity, it is essential to acknowledge the role that Life, emerging directly from our Divine Source, plays in this process. Integral Relational Logic is just such a science, unprecedented in the entire history of human learning, creating not just a few new cards, but a pristine pack that has the potential to bring all our thoughts into universal order, but without inhibiting further creativity in any way.

However, back in 1980, when I went through a cataclysmic death and rebirth process, I knew none of this, having been conditioned by the culture that I was born into, like most of my contemporaries. At the time, I was engaged in developing a national marketing pro-

gramme for decision support systems and personal computing for IBM (UK) in London, being particularly concerned to answer three fundamental questions about the relationship of human beings and computers:

1. What is causing scientists and technologists to drive the pace of evolutionary change at exponential rates of acceleration?
2. Will computers ever develop artificial intelligence, exceeding human intelligence, and if not, what quality do human beings have that machines can never have?
3. Whatever the answer to this question, what are the long-term psychological and economic implications of humanity's growing dependency on information technology, particularly for employment, skills profiles, and the quality of life at work?

Can machines think?

Now, to study these most critical issues facing humanity today, I first needed to answer the question that Alan Turing, the founder of the theory of automata, asked in the philosophical journal *Mind* in 1950: "Can machines think?"[53] This was a year after a stored-program computer at the University of Cambridge ran its first program,[54] initiating the Computer Age we know so well today. But do we really know what a computer is and its relationship to us human beings?

Well, as the computer is essentially a tool of thought, as we saw on page xxiii, materialistic, mechanistic science, which has evolved from Isaac Newton's *Mathematical Principles of Natural Philosophy*, which unified Johannes Kepler's celestial physics and Galileo Galilei's terrestrial dynamics, cannot possibly tell us what we have invented. Spending many billions of dollars on telescopes looking for the origin of the physical universe or extraterrestrial primitive forms of life or even intelligent beings can tell us nothing about the similarities and differences between human beings and computers. Neither can spending a similar amount of money searching for a fundamental particle of matter.

Rather, if we are to understand what is happening to humanity at the present time, "We need a Humanistic Science of Man as the basis for the Applied Science and Art of Social Reconstruction," as Erich Fromm pointed out in *To Have or To Be?* in 1976.[55] And this can only happen when we follow the maxim "KNOW THYSELF," which seven wise men inscribed on the temple of Apollo at Delphi, as Plato tells us.[56] In a similar fashion, when Neo visited the Oracle in the popular movie *The Matrix*, hanging on the kitchen wall was a sign saying Temet Nosce, Latin for 'Know yourself'.

Sadly, however, knowing ourselves, free of our mechanistic conditioning, is discouraged and often ridiculed in religion, science, and business today, some even regarding self-inquiry as a taboo. For the ultimate goal of self-inquiry is to realize our Divinity, to heal the split be-

tween humanity and God, something to be avoided at all costs, for it involves the psychological death of the separate self.

This split lies deep in the collective psyche, as we can see from the root of *human*, which is Latin *humus* 'ground, earth', from the Proto-Indo-European (PIE) base **dhghem-* 'earth'. This etymology shows that our forebears some 7,000 years ago conceived of human beings as earthlings in contrast to the divine residents of the heavens, as Calvert Watkins explains in *The American Dictionary of Indo-European Roots*.[57] To be humble, which derives from the same root, is therefore to deny our Divinity. Conversely, it is arrogant to realize and acknowledge our True Nature as Divine Beings, *arrogance* being the opposite of *humility*.

This schism between humanity and the Absolute is particularly dominant in Christianity, as it is encapsulated in the Nicene Creed: "We believe in one God, the Father Almighty, Maker of Heaven and Earth, and of all things visible and invisible. And in one Lord Jesus Christ, the only-begotten Son of God." This fundamental split in Christianity was established at Nicaea in Turkey in 325, when the Roman emperor Constantine, who had converted to Christianity thirteen years earlier, convened a council to "work out a standard formulation of Christian faith".[58] Following advice from his bishops, Constantine hoped "that Christians everywhere would come to see themselves as members of a single church that they called catholic, which means 'universal',"[59] from Greek *katholikos*, from *kata* 'in respect of' and *ὁlos* 'whole'.

Yet Jesus did not claim that he alone is Divine for he knew that everyone is, as we can see from many sayings in the gnostic gospel of Thomas, who knew Jesus intimately as one of his disciples. For instance, Thomas wrote in Saying 24 that Jesus said, "There is a light within a person of light, and it lights up the whole world."[60] In contrast, John wrote in his gospel that people could only "bear witness of the Light", for only in Jesus was "the Word made flesh".[61]

As Elaine Pagels tells us, John probably wrote his gospel in the last decade of the first century to refute the teachings of the Thomas Christians, whose teachings were suppressed, only to be rediscovered in 1945 in Nag Hammadi in Egypt. John is particularly critical of Thomas, the one called Didymous (Greek for twin). He invented the character of *doubting* Thomas, perhaps as a way of caricaturing a revered teacher who he regarded as faithless and false.[62]

This denial of our Divinity is a symptom of what Fromm called our sick society, investigated in a series of brilliant books written from the 1940s to the 70s. In 1956, in *The Sane Society*, he specifically asked the questions, "Are we sane?" and "Can a society be sick?" answering them with a resounding 'YES!' and 'NO!', respectively.[63]

The root cause of our malaise is that we are out of touch with Reality, with our Immortal Ground of Being, especially in cultures where the monotheistic religions hold sway. So to assuage the deep fear of death that arises from such a split, we have created immortality symbols to give ourselves a precarious sense of security and identity in life. At first, these were reli-

giously induced, mainly in the belief in an immortal soul that either reincarnates indefinitely in cyclic time or has everlasting life in linear time. However, today, the primary immortality symbol is money, which has religious connotations, as we see from the words *In God We Trust*, the motto of the United States of America, which has appeared on American coins since 1864 and on bank-notes since 1957.[64]

We can also see quite clearly that money is an immortality symbol from the tower blocks that banks build in the centre of major cities today. As James Robertson, cofounder in the mid 1980s of the New Economics Foundation (NEF) and The Other Economic Summit (TOES), points out in *Future Work*, these buildings play a similar role in society today to the cathedrals that dominated the centres of medieval cities. Both serve to reinforce our belief in immortality symbols; in the Middle Ages, the notion of a personal God, and today, money. As James goes on to say, "The theologians of the late middle ages have their counterpart in the economists of the late industrial age. Financial mumbo-jumbo holds us in thrall today, as religious mumbo-jumbo held our ancestors then."[65]

In practical terms, the sense of alienation and otherness, which is the primary source of fear, is forced on us by monetary economic systems that tell us that we must compete with each other for the precious resources of our beautiful planet Earth. But is such a conflict-ridden way of organizing our business affairs viable in a world where we are all interdependent on each other? Of course not. As an increasing number of people recognize today, both capitalism and communism threaten the very survival of our species. So Western civilization, which provides the overall context for the global economy, must die if we, as members of *Homo sapiens*, are to reach our fullest potential as Divine, Cosmic beings, living in Wholeness at the end of time.

So having found the root cause of our conflict-ridden sick society, the cure is self-evident: we all need to engage in self-inquiry. For not to know why we behave as we do is actually antisocial. Our inner lives are a public, not a private matter, as Vimala Thakar pointed out in *Spirituality and Social Action*.[66] But tragically this obvious truth is not recognized by Western civilization. So to discover the root causes of conflict and suffering within ourselves, and hence in the world, is countercultural.

As Fromm's call to develop a comprehensive psychospiritual science of evolution had not been answered in Turing's time, Turing was of the opinion that by the turn of the millennium machines would be able to think in a generally accepted sense, although he did have some reservations, mainly arising from evidence for extrasensory perception.[67]

In contrast, Ada Lovelace, the daughter of Lord Byron and his wife Annabella, a poet and mathematician,[68] respectively, was quite clear on this point. In a brilliant memoir on Charles Babbage's Analytical Engine, the first design for a general-purpose computer, which included the first program ever published, she wrote in 1843:

> The Analytical Engine has no pretensions to *originate* anything. It can do whatever we *know how to order it* to perform. It can *follow* analysis; but it has no power of *anticipating* any analytical relations or truths. Its province is to assist us in making *available* what we are already acquainted with.[69]

Peirce said essentially the same thing in an article published in *The American Journal of Psychology* in 1887 titled 'Logical Machines'. He began by quoting from 'Voyage to Laputa' in Jonathan Swift's satirical *Gulliver's Travels*, where "there is a description of a machine for evolving science automatically." In the grand academy of Laputa, Gulliver met a professor of speculative learning, who said, "By this contrivance, the most ignorant person, at a reasonable charge, and with little bodily labour, might write books in philosophy, poetry, politics, law, mathematics, and theology, without the least assistance from genius or study." While Peirce reviewed the state of 'reasoning machines' at the time, he was of the view that every machine is "destitute of all originality". As he added, "We no more want an original machine, than a house-builder would want an original journeyman, or an American board of college trustees would hire an original professor."[70]

Essentially, the mechanistic view of the Universe and hence of humanity that Turing believed in arises because we live in a culture that attempts to suppress self-reflective Intelligence. For, as Krishnamurti pointed out in *Education and the Significance of Life*, written three years after Turing's article, if the governing authorities, including parents, allowed our innate intelligence to be liberated from its mechanistic conditioning, the entire superstructure of society would come tumbling down and we would be living in love, peace, and harmony with each other and our environment.[71]

While such a utopian vision is what many of us long for deep in our hearts, it has not yet been realized for this can only fully come about through the psychological death of the personal soul, which many religionists and spiritual seekers believe is immortal. Because very few people are willing to question all the divisive monotheistic, materialistic, mechanistic, and monetary beliefs and assumptions on which Western civilization is based, humanity today finds itself in a pretty perilous predicament.

Scientists and technologists are driving the pace of evolutionary development at exponential rates of accelerating change, but we have no publicly accepted scientific explanation for this unprecedented phenomenon. We are running our business affairs having little understanding of what is causing us to behave as we do, which is like driving our cars along the highway faster and faster with our eyes closed, putting the health, well-being, and even survival of our species in very great danger. For any species that does not adapt to its changing environment cannot expect to survive for long.

As a consequence of our ignorance, out of touch with Reality, a number of influential scientists, philosophers, and psychologists are making predictions that within two or three decades machines with artificial intelligence will be able to think for themselves, that the

computer will one day become more intelligent than us human beings. Are they right and what would be the psychological and economic implications if machines would soon rule the world, effectively making human beings second-class citizens?

For myself, I began to ponder this fundamental question of human existence in September 1964, when I wrote my first program in Fortran on an IBM 7094: to calculate the roots of a quadratic equation. All I knew at the time is that computers are very good at arithmetic but rather poor at pattern recognition, while with humans the situation is the other way round. Why is this? Why is it so easy for most of us to instantly recognize a human face as a whole but so difficult for a computer program to do so?

Even though I did not know the answer to this question, I continued to work in the information technology industry, joining IBM as a systems engineer in a sales office in London in September 1968. For I believed that by automating people's jobs, this would help free them from drudgery, enabling them to be more creative and thereby have more satisfying jobs.

However, towards the end of the 1970s, when developing a national marketing programme for decision support systems and personal computing, I began to have second thoughts. I could see that the global economy holds the seeds of its own destruction within it and could collapse like a house of cards by the time my children were bringing up children of their own, during the decade we are now living in. For if artificial intelligence were possible, it would be the economic imperative of our times to replace all cognitive jobs by machines, causing mass unemployment. The cycle that humans are both the producers and consumers of the goods and services that we exchange with each other would be broken.

Alternatively, if computers could never surpass human intelligence for some unknown reason, this would mean that technological development could not drive economic growth indefinitely. Human beings would be the leading edge of evolution, not machines, as some believe today, although most seem to be agnostic in this respect. So whether or not artificial intelligence is possible, during the early decades of the twenty-first century, we would need to make radical changes to the work ethic, focusing more attention on realizing our fullest potential as human beings than on technological development.

But which of these apocalyptic scenarios is the true one? Well, to test the hypothesis that machines can think for themselves, Turing proposed what he called an 'imitation game' in which a human interrogator asks questions of a computer and a human trying to determine which is which.[72] This imagined game became instantiated in 1990, when the American philanthropist Hugh Loebner agreed with The Cambridge Center for Behavioral Studies in Massachusetts to underwrite a contest designed to implement a variation of what has become known as the Turing Test.

Rather than an interrogator asking questions, the contest is designed as a conversation between a human and a 'chatbot', which apparently can initiate the dialogue. A Grand Prize of

$100,000 and a Gold Medal, depicted in Figure P.4, is to be awarded for the first computer whose responses are indistinguishable from a human's. It is suggested that such a computer could be said 'to think'. Pending such a momentous event, each year an annual prize of $2,000 and a bronze medal is awarded for the most human-like computer.[73]

An experiment in learning

Figure P.4: *Loebner Gold Prize Medal for successful Turing Test*

Since May 1980, when I resigned from my marketing job with IBM in London, I have been engaged in a more direct approach to answering the question, "Can machines think?" Intuitively, I felt that the answer to this question is no, that there must be something about human beings that is not mechanical. But I could not prove this scientifically, either conceptually or experientially. So rather than attempting to program a computer to imitate human intelligence, to test whether artificial intelligence is possible, I reversed this process.

The imitation game that I have been playing is to mimic the Internet, which has involved a deep and broad study into both computer technology and human psychology. Specifically, to test the hypothesis that humans are machines and nothing but machines, I assumed that we are and set out to prove the opposite through the mathematical method of *reductio ad absurdum*. To this end, I have become an autodidact, for the past thirty-three years re-educating myself, writing the book that I wanted to read as a teenager in the 1950s, but which no one I could find had written then or even now.

Inspired by the thought experiments that physicists conduct, I have been conducting a thought experiment in which I imagine that I am a computer that switches itself off and on again so that it has no programs within it, not even a bootstrap program to load the operating system. Starting afresh at the very beginning with a *tabula rasa* 'blank slate', with no external authorities to tell it how or what to learn, this computer then has the task of integrating all knowledge in all cultures and disciplines at all times, past, present, and future, into a coherent whole, rather like the way that the Internet is becoming. In human terms, we can only really understand ourselves and become fully integrated human beings through self-inquiry, guided by the energies within us, which we can call our inner guru, meaning 'dispeller of darkness', as the *Guru Sutra* tells us.[74] For we cannot answer the questions "Who am I?" and "Who are we?" through filters and conditioning that we have introjected from the cultures we are born into.

This thought experiment is entirely in the spirit of the motto of the Royal Society of London for Improving Natural Knowledge, founded in 1660: *Nullius in verba*, which roughly

translates as 'take nobody's word for it.' As the Royal Society's website says, this motto "is an expression of the determination of Fellows to withstand the domination of authority and to verify all statements by an appeal to facts determined by experiment."[75]

By performing this experiment in learning, evolution has carried me to its glorious culmination, its Omega Point, where all the divergent streams of the last fourteen billion years of evolution converge in what Teilhard called a megasynthesis, 'a kind of gigantic psychobiological operation'.[76] And just as he foretold, such a convergence leads into superconsciousness through his law of complexity-consciousness: the greater the complexity, the greater the consciousness.[77]

Figure P.5: *Hardanger Fjord, Norway*

So today, I am not only standing on the summit of the Mountain of all Knowledge, I am, at once, resting in Stillness at the bottom of the Ocean of Consciousness, depicted in Figure P.5, a photograph of Hardanger Fjord in Norway, where mountains 1000 m high plunge into the ocean 1000 m deep. It is by standing on this Pathless Land on the top of this Mountain, like Hardangervidda, a nearby mountain plateau, that we can take a Holoramic 'Whole-seeing' perspective of the Cosmos, from Greek *ὅlos* 'whole' and *ὁrāma* 'sight, view', cognate with *panoramic* 'all-seeing'.

To explain how this miracle has come about, we need to look carefully at how the Internet is designed. When designing the Internet, or even applications for the Web, information systems architects do not normally begin programming without a vision of what they are to design. Rather, like architects who design domestic dwellings and opera houses, they begin with blueprints, called model-driven architecture (MDA). Many such modelling techniques have evolved during the past half a century, the ones that we need for our experiment in learning being the relational model of data, introduced by Ted Codd in 1970,[78] already mentioned, and object-oriented modelling methods, which evolved from the programming language Simula, developed by Ole-Johan Dahl, Bjørn Myhrhaug, and Kristen Nygaard at the Norwegian Computing Center in the mid 1960s.[79]

The science of consciousness

These modelling methods have become Integral Relational Logic (IRL), the subject of this book. But what sort of thing is IRL? Well, this is not easy to say because of the way we form concepts, a creative process that lies at the heart of what we can best call the universal science of thought and consciousness. Essentially, we form concepts by carefully comparing the sim-

ilarities and differences in the data patterns of our experience, putting these interpreted patterns into various sets, as appropriate.

But transcultural, transdisciplinary IRL is something quite new, beyond comparison, utterly unprecedented in the entire history of human learning. For, as far as I can tell, no one before has performed the thought experiment described in the pages of this book. For this reason, many cannot imagine what IRL might be, some even saying that it is impossible, that healing the fragmented, split mind by integrating all knowledge into a coherent whole is actually beyond the capacity of the human mind. For by doing so, such an all-inclusive synthesis of everything would seem to make the practitioner omniscient, rather like the Internet or the Christian concept of God.

However, such grandiose, hubristic thoughts indicate a lack of understanding of the role of an information systems architect in business. The word *architect* derives from Greek *arkhitektōn* 'architect', from *arkhi-* 'chief', related to *arkhē* 'origin, cause, leadership, rule', and *tektōn* 'builder, craftsman'. So an architect is a master builder, the one who can see the big picture, how all the parts of a structure fit together to form a coherent whole. In business terms, information systems architects are generalists, humbly working with specialists in user departments to develop integrated business systems through the relationships between processes, classes, and entities, as examples of forms and structures.

The tools they use for this integrative process are so general they can be used in any industry whatsoever, whether it be manufacturing or retail, educational or medical, or banking or governmental. So no matter how detailed or broad a view that IS architects might take, all the structures they work with have the property of self-similarity, like fractals in mathematics, simply described as a multidimensional network of hierarchies. But this does not mean that IS architects are omniscient. Rather, they are specialists in conceptual abstractions and generalities, just as my doctor in Sweden calls herself a specialist in general medicine, corresponding to a general practitioner in the UK—jacks of all trades, masters of none.

To test Turing's hypothesis that humans are machines and nothing but machines, we can generalize the modelling methods of IS architects so that they apply in all cultures and disciplines, not just all industries. These methods thereby become the commonsensical science of reason, thought, and consciousness, at the mystical heart of psychology, more fundamental than all the other sciences, including mathematics, physics, and biology.

But IRL is not just a science, it is also an art. For *science* derives from *scīre* 'to know', from PIE base **skei-* 'to cut, split', also root of *schizoid*, *scīre* meaning here 'to separate one thing from another, to discern'. In contrast, *art* derives from Latin *ars* 'skill, way, method', from PIE base **ar-* 'to fit together', also root of *coordinate*, *reason*, *harmony*, and *order*. So it is the task of the creative arts to put back together the distinctions that reductionist science has discerned, bringing great joy to the practitioner.

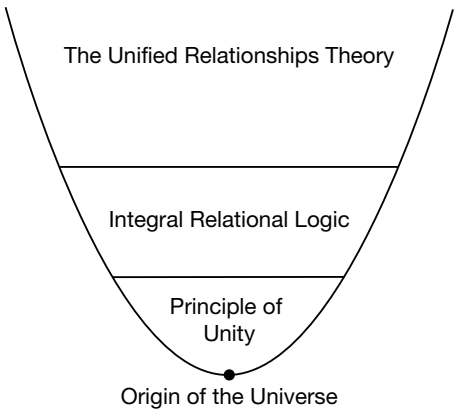

Figure P.6: *Foundations of the URT*

This is essential in creating the science of consciousness, for *consciousness* means 'knowing together', from Latin *cum* 'together with' and *scīre* again. *Consciousness* is thus an oxymoron, rejoining what the divisive, analytical mind has separated. So IRL is as much the *art* of consciousness as the *science* of consciousness, lying within and embracing all disciplines of learning, including philosophy, religion, music, and literature. IRL thus provides the framework or system of coordinates for the Unified Relationships Theory (URT), the much sought-for, but maligned theory of everything (TOE) or grand unified theory (GUT), a coherent body of knowledge that describes all the forces in nature—both psychospiritual and physical—within a single, all-encompassing framework. Figure P.6 shows how the URT rests on IRL and the Principle of Unity, arising directly from the Origin of the Universe.

Healing the mind in Wholeness

What this means is that the URT is not a cosmology to be compared with any other. For it heals the fragmented, split mind in Wholeness. The URT, with the Principle of Unity at its heart, is an all-inclusive cosmology of cosmologies, embracing, for instance, both the geocentric and heliocentric views of the solar system, the former being true for Aristotle and Ptolemy, the latter being true for Aristarchus, Copernicus, Kepler, and most scientists ever since.

To emphasize this point, the URT does not reject the geocentric model, for it follows E. F. Schumacher's fundamental maxim for mapmaking: "Accept everything; reject nothing."[80] Such an all-inclusive approach to learning and social intercourse is a clear sign of innate intelligence at work, for it shows the ability to see both sides of any situation. As an increasing number of people are realizing today, conflict-ridden party politics no longer works. In a world in which we are all interdependent on each other, the only system of governance that has any chance of success is a bipartisan one.

Of course, this can sometimes feel very threatening when we are identified with our ideas, theories, beliefs, and opinions, a discomfort that can only be fully reconciled in Egoless Nondual Wholeness. For instance, in the 2012 American election, either-or thinkers who voted for Mitt Romney felt excluded by the bipartisanship of Barack Obama. This is the paradox at the heart of the prisoners' dilemma in games theory. If the prisoners selfishly consider only their own situation, the optimum strategy of blind logic is to betray their fellow prisoner. However, when we open our eyes and recognize that we are social animals, the best strategy for the group is to cooperate.

Furthermore, as the URT heals the split between science and the humanities and between science, philosophy, and religion, we can call this synthesis of all knowledge *panosophy*, modelled on *philosophy*, from Greek *pan* 'all' and *sophia* 'wisdom'. The ancient Greeks used the word *pansophos* to mean 'very wise', literally 'all-wise'. In 1642, this led to the coinage of *pansophy*, occasionally spelled *pantosophy*, to mean 'universal or cyclopædic knowledge; a scheme or cyclopædic work embracing the whole body of human knowledge'.[81] However, I prefer *panosophy*, not only because it rolls off the tongue more readily, but also because it denotes the specific meaning: 'the general discipline that integrates all specialist disciplines into a coherent whole'. This means that panosophers are invisible to the fragmented, categorizing mind for they do not belong anywhere other than to Wholeness.

To see this, it is vitally important to make a clear distinction between transdisciplinary panosophy and all other disciplines, including all isms, ologies, and other osophies. For if panosophy is equated with any specialist discipline, this is an example of what Gilbert Ryle called a 'category-mistake'.[82] This is such an important point that I would like to quote in full the first example that Ryle gives of such an error in reasoning.

> A foreigner visiting Oxford or Cambridge for the first time is shown a number of colleges, libraries, playing fields, museums, scientific departments and administrative offices. He then asks, 'But where is the University? I have seen where the members of the Colleges live, where the Registrar works, where the scientists experiment and the rest. But I have not yet seen the University in which reside and work the members of your University'. It has then to be explained to him that the University is not another collateral institution, some ulterior counterpart to the colleges, laboratories and offices which he has seen. The University is just the way in which all that he has already seen is organized. When they are seen and when their coordination is understood, the University has been seen. His mistake lay in his innocent assumption that it was correct to speak of Christ Church, the Bodleian Library, the Ashmolean Museum and the University, to speak, that is, as if 'the University' stood for an extra member of the class of which these other units are members. He was mistakenly allocating the University to the same category as that to which the other institutions belong.[83]

We can say that panosophy is to all the traditional disciplines of learning, as a university is to the colleges, libraries, museums, etc. Now *university*, like *universe*, comes from a Latin word *universus*, from *unus* 'one' and *versus*, the past participle of *vertere* 'to turn'. So if a university lived up to its name, it would teach its students how to turn their view of themselves and the world they live in into a single coherent whole. But universities are very far from doing this. They are divided into fragmented fields, surrounded by high hedges, each with a notice outside saying, "Keep out, beware of the bull!"

This problem of fragmentation is not new. It arises from the view that evolution since the most recent big bang some fourteen billion years ago has been more divergent than convergent. First, large and small material objects were formed, such as stars, galaxies, atoms, and

electrons, which we can call hylogenesis, from Greek *ὑlē* 'matter'. Then during the last three and a half billion years on Earth, we have seen the wondrous diversity of the species evolve.

Biogenesis then gradually gave way to noogenesis—the evolution of the mind—about 25,000 years ago, the analytical mind becoming predominant at the dawn of history about 5,000 years ago. As a result, our minds have become fragmented and shattered into little pieces, not fitting together as a coherent whole. And as our external world is simply an expression of our intersubjective inner world, society has become divided into religious and national factions, academic specialization, and the division of labour in the workplace.

Out fragmented, specialized minds have led Western civilization to be based on the false assumption that we human beings are separate from the Divine, Nature, and each other, not recognizing that the Authentic Self that we all share is Wholeness. As a consequence, mainstream religion, science, economics, law, and mathematical logic are based on seven pillars of unwisdom, misconceptions of God, Universe, Life, humanity, money, justice, and reason, a term that Arthur Koestler coined to highlight the absurdities and limitations of the biological, behavioural, mechanistic, and quantitative sciences.[84] Fragmentation has thus led to delusion, a mental disorder that is so widespread that it is considered normal.

Now, as well as healing our fragmented minds, we also need to heal minds split by the Abrahamic religions' belief that God is other, that there is a great gulf between the Creator and created that can never be bridged, as F. C. Happold has pointed out in *Mysticism*.[85] And as Elaine Pagels tells us, "Even the mystics of Jewish and Christian tradition who seek to find their identity in God often are careful to acknowledge the abyss that separates them from their divine Source".[86]

It is vitally important here not to confuse the fragmented mind, suffering from delusion, and the split mind, detached from the Divine, from Reality, suffering from schizophrenia, from Greek *skhizo-* 'split', from *skhizein* 'to split' and *phren* 'mind'. The traditional way to heal this mental disorder is by following the downward arrow in Figure P.3 on page xxxiii through meditation, contemplation, yoga, tantra, and self-inquiry, which quieten the mind so that it eventually becomes 'No-mind', the theme of a popular festival held in mid Sweden every summer.[87]

But killing the mind, as some believe that Ramana Maharshi taught,[88] clearly cannot tell us why scientists and technologists are driving the pace of evolutionary development at exponential rates of acceleration, necessary if we are to intelligently manage our business affairs with full consciousness of what we are doing.

Rather, to understand what is happening to humanity at the present time, we need to heal the fragmented mind, by following the upward arrow in Figure P.3, for as David Bohm has said:

> Fragmentation is now very widespread, not only throughout society, but also in each individual; and this is leading to a kind of general confusion of the mind, which creates an endless series of problems and interferes with our clarity of perception so seriously as to prevent us from being able to solve most of them. Thus art, science, technology, and human work in general, are divided up into specialities, each considered to be separate in essence from the others.

Continuing, "each individual human being has been fragmented into a large number of separate and conflicting compartments … to such an extent that it is generally accepted that some degree of neurosis is inevitable.[89]

The Center Leo Apostel for Interdisciplinary Studies at the Vrije Universiteit Brussel (Free University of Brussels) in Belgium is one academic institution that has similarly identified this problem of fragmentation, seeking to create a coherent worldview, integrating the specialisms into which academia is generally divided. Seven specialists from various institutions in Belgium, Germany, and the Netherlands have come together to write a proposal for this integrative process called *World Views: From Fragmentation to Integration*.[90] As they say:

> The project of consciously constructing a world view is indeed an urgent one, since most of the macro-problems and micro-problems of our present time are directly or indirectly related to this situation of fragmentation. It is precisely because we lack such global views of the world that our ability even to start looking for lasting solutions to these problems is limited.

They then go on to define *world view* in this way:

> A world view is a coherent collection of concepts and theorems that must allow us to construct a global image of the world, and in this way to understand as many elements of our experience as possible. … Hence, a world view is a system of co-ordinates or a frame of reference in which everything presented to us by our diverse experiences can be placed. It is a symbolic system of representation that allows us to integrate everything we know about the world and ourselves into a global picture, one that illuminates reality as it is presented to us within a certain culture.

Integral Relational Logic provides the transcultural, transdisciplinary system of coordinates or frame of reference that the Center Leo Apostel is seeking. It has come about because to overcome the problem of specialization, we clearly need to become generalists, for as Krishnamurti said, "Can any specialist experience life as a whole? Only when he ceases to be a specialist."[91]

What brought Bohm and Krishnamurti together around 1960 was the principle that the observer and observed cannot be separated.[92] In quantum physics, this principle arises because acts of observation and measurement affect what is being observed and measured. Thomas Young's double-slit experiment, first conducted in 1803, and Werner Heisenberg's uncertainty principle are a couple of examples. And in spiritual practice, self-reflective Intelligence is clearly required, enabling us to say, with Meister Eckhart, "The eye with which I see God is the same as that with which he sees me."[93] In psychological terms, to heal both our fragmented and split minds, David Bohm suggests:

> The fragmentation involved in a self-world view is not only in the content of thought, but in the general activity of the person who is 'doing the thinking', and thus, it is as much in the process of thinking as it is in the content. Indeed, content and process are not two separately existent things, but, rather, they are two aspects or views of one whole movement. Thus fragmentary content and fragmentary process have to come to an end *together*.[94]

When this happens, the fragmented, split mind becomes a translucent Supermind, which Aurobindo Ghose describes thus: "The Supermind is the Vast; it starts from unity, not division, it is primarily comprehensive, differentiation is only its secondary act."[95] However, despite the brilliant insights of these illuminati, they did not actually tell us how to heal the fragmented mind in Wholeness, how to unify the inner and outer. For to do so, we need to conduct the thought experiment described in this book, by starting afresh at the very beginning as generalists.

However, this volume on IRL describes just the skeleton of the body of all knowledge and is thus rather stark. The flesh consists of everything that human beings have learned or will learn about God, the Universe, and humanity throughout all of time. Volumes Two and Three of the *Wholeness* trilogy on *The Unified Relationships Theory* and *Our Evolutionary Story*, respectively, flesh out this skeleton, focusing attention on the most critical evolutionary, causal, and psychospiritual issues facing humanity today.

This might seem rather overwhelming. However, IRL is actually of the utmost simplicity, one of four guiding principles, the others being clarity, integrity, and consistency. This last needs a little explanation. In *Meditations*, René Descartes wrote, "I am only a thinking and unextended being … entirely and truly distinct from my body, and may exist without it."[96] This perspective gave rise to the split between *res cogitans* 'thinking substance, mind, or soul'[97] and *res extensa* 'extended substance', by which Descartes meant an object with breadth, width, and height occupying space.[98] As Bryan Magee tells us, " 'Cartesian dualism', the bifurcation of nature between mind and matter, observer and observed, subject and object … has become built into the whole of Western man's way of looking at things, including the whole of science."[99]

Actually, Descartes was not the first dualistic thinker in the history of Western thought. He was merely following a tradition that went back at least to Aristotle, whose Law of Contradiction we quoted on page xxix. Mathematicians need this law in the rational presentation of their intuitive reasoning, for if the axioms of mathematics are inconsistent, then any theorem can be proved from them. However, deductive logic and mathematical proof are mechanistic systems of thought functioning in the horizontal dimension of time from past to future. And no such linear way of thinking can possibly create a true representation of the paradoxical world we live in, which is manifestly nonlinear.

In contrast, IRL, like the business modelling methods from which it has evolved, is non-linear. It is thus able to embrace paradoxes and self-contradictions in a thoroughly consistent manner, treating all concepts in exactly the same, egalitarian way. So Heraclitus' Hidden Harmony, which Aristotle objected to, is welcomed in IRL, where it is called the Principle of Unity, outlined on page xxviii.

Getting started

Now, as IRL has no past, what words and other symbols can we use to describe how it has become manifest in consciousness? For words are generally encumbered by habit and tradition, often emotionally loaded, preventing us from having intelligent conversations about the most important issues in life. Well, the energy that has brought IRL into being is not unknown in human experience, even though the existence of this energy is generally denied by science, economics, and religion in Western civilization. Heraclitus called this energy the *Logos*, and it has been given many other names over the years, such as *Dharma*, *Rita*, and *Tao* in the East.

It is important to distinguish the esoteric and exoteric meanings of the Greek word *logos*. Exoterically, *logos* can be translated into many words in English, such as 'word', as we see in the opening sentence of John's Gospel: "In the beginning was the Logos, and the Logos was with God, and the Logos was God." John clearly meant the mystical meaning of Logos here, but it is generally translated with a superficial meaning. This happened because the priests who translated the Bible claimed the word of God as their own, attempting to deny their parishioners direct access to the Divine. For if they allowed people to know the Truth that would set them free, that "would mean their demise as gatekeepers to heaven", as the Kabbalistic *Zohar* says.[100]

As the Logos has created IRL, that is one reason why Integral Relational Logic is so called. Another is that Plato's concepts of universal and particular[101] appear in object-oriented modelling methods as class and instance and Aristotle's concepts of subject and predicate[102] are represented as entity and attribute in the relational model of data. As entities are instances of classes and as logic is the science of reason, when these two business-modelling methods are unified in IRL, we can see that three fundamental building blocks of reason are **class**, **entity**, and **attribute**, emboldened to denote that they are primal, bootstrap concepts, necessary to get us off the ground, in conformity with Ockham's razor.

Furthermore, to cope with information overload, we form concepts, as mental images, through a process of abstraction, such as human, primate, mammal, vertebrate, and animal in the tree of life. In order to extract simplicity from complexity, conceptual modelling methods in business take this process of abstraction even further, **Object** being the superclass for all other classes, capitalized and emboldened to denote that it is a class in the conventional

manner. It is this powerful process of abstraction that has enabled the Internet to expand at hyperexponential rates of acceleration during the past couple of decades.

IRL takes this generalizing process to its utmost level of abstraction, **Being** being the superclass of all concepts from all cultures and disciplines, corresponding to Aristotle's concept of being in ontology, the science that embraces all the particular sciences,[103] which naturally lies in the foundations of IRL, prior to interpretation by a knowing being. Interpretation leads to knowledge about knowledge at the epistemological level in the foundations of IRL, corresponding to semantic data models in business modelling. In this simple way, our learning can accelerate ever faster through the power of synergy, at superhyperexponential rates of growth and development. In conformity with the Principle of Unity, IRL is thus as much active as passive, having the ultimate generating role in the expansion of knowledge.

It is by abstracting a few primal concepts from the world of learning that we can integrate all knowledge into a coherent whole. That is why IRL is called integral, from Medieval Latin *integrālis* 'making up a whole', from Latin *integer* 'complete', cognate with *integrity*, also meaning 'the quality of being honest'. Other primal concepts are **structure**, **form**, **relationship**, and **meaning**, which are simply depicted in tables, like mathematical relations and matrices, and mathematical graphs or semantic networks, as basic ways that we all use to organize our ideas.

Indeed, we can look at the entire Universe, as the Totality of Existence, in terms of these four basic concepts, forming all concepts in exactly the same way, without making any special, such as mass, space, and time, or God and 'I'. We can thus see that egalitarian IRL is simple commonsense, the universal science of thought and consciousness that we all implicitly use everyday.

Now, this evolutionary process, following the upward path in Figure P.3 on page xxxiii, has an involutionary opposite, which is simply described by applying Leonhard Euler's map-making technique to all structures in the Universe, whether they be physical or nonphysical. For the self-inclusive map of all knowledge in IRL can be represented as a mathematical graph, consisting only of nodes and arcs between them. Each level in this map, which exists prior to interpretation by a knowing being, is a structure consisting of forms and meaningful relationships between them, formed through evolution.

However, we can also see each node as a structure, consisting of further forms and relationships. Diving deeply through these hierarchical levels, in an involutionary, meditative process, nodes eventually become singularities. All that remains then is a network of relationships, which some physicists call the zero-point field or simply the Field, which the journalist Lynne McTaggart describes as a healing energy.[104] As she says, the Field is also the Bond, which connects the space between us, enabling us to see the Whole.[105]

For fields are a special case of relationships, and relationships make the world go round. If we then surrender totally to the Egoless Now, even these relationships disappear, and we experience Reality as a seamless, borderless continuum, with no divisions anywhere. It is this Pathless Land that I call Wholeness or Consciousness, which Krishnamurti called the Truth when dissolving the organization that wanted to make him a world teacher in 1929.[106]

Indeed, even the concept of the Truth or Absolute is formed in exactly the same way as all other concepts: by carefully examining the similarities and differences in the data patterns of our experience, denoted by **Datum**, the most fundamental bootstrap concept, from Latin *datum* 'something given', the neuter past participle of *dare* 'to give, cause'. Even here the Principle of Unity applies, as the Absolute is both Immanent and Transcendent with respect to us as knowing beings. The Absolute is also both Nondual Wholeness and Nondual Oneness, with a primary-secondary relationship between Wholeness and Oneness. Furthermore, when we look at the Totality of Existence in terms of both the Formless Absolute and the relativistic world of form, with no separation between them, we can see another primary-secondary relationship between Nonduality and duality. As mystics in the East have long known, all forms, structures, and relationships are *lila*, nothing but the delightful play of the Divine, called *maya*, 'deception, illusion, appearance', not real in an Absolute sense.

What this means is that we cannot understand what it truly means to be a human being, in contrast to the other animals and machines, like computers, by taking a human perspective, for this puts second things first, quite illogical. Rather, we can only really understand humanity's relationship to God and the Universe by taking a Divine, Cosmic perspective, free of the sense that we are separate from God, Nature, and each other. Such a worldview arises from studying IRL, for then individual consciousness expands and deepens to such an extent that it becomes coterminous with Consciousness itself, called *Satchidananda* in Sanskrit, meaning 'Bliss of Absolute Consciousness', from *Sat* 'Absolute, Eternal, Unchanging Being; Truth' (also present in Mohandas Ghandi's *satyagraha* 'truth force'), *Chit* 'Absolute Consciousness', and *Ananda* 'Bliss, Absolute Joy'.

Consciousness is all there is

Even though Ramesh S. Baksekar, late President of the Bank of India and an Advaita sage, wrote a book in 1992 called *Consciousness Speaks* pointing out "All there is, is Consciousness," this self-inclusive *Weltanschauung* is not well-known, even in spiritual circles. For as Wayne Liquorman said in his Editor's Notes, "If that is understood completely, deeply, intuitively, then you need read no further. Put the book down and go on joyously with the rest of your life."[108]

I use the German *Weltanschauung* advisedly, because it provides more meaning than *worldview*, both these words being used in English from 1868 and 1858, respectively, to mean

'A particular philosophy or view of life; a concept of the world held by an individual or a group'. *Weltanschauung* is derived from *Welt* 'world', from Middle High German *wërlt*, from Old High German *weralt*, cognate with *world*, and *Anschauung* 'view', from Middle High German *anschouwunge* 'observation, mystical contemplation'. So *Weltanschauung* has a deeper meaning than *worldview*, indicating both scientific observation and spiritual meditation.

As Consciousness is Ultimate Reality, which we all share no matter which culture or subculture we live in, some have endeavoured to describe what this exquisite sense of Wholeness means through two well-known metaphors. First, we can experience Consciousness as a form of radiant light, which shines brilliantly through us once the clouds of unknowing are dispersed, in the terms of an anonymous fourteen-century English mystic.[107]

These clouds are our mechanistic conditioning, often hidden deep in the collective, cultural, and personal unconscious. So, if we are to disperse these clouds and so realize our fullest potential as human beings, we need to bring the entire unconscious of humanity into consciousness so that it can be carefully examined in the penetrating light of Consciousness. It is in this way that evolution can become truly conscious of itself in modern scientific man, as Julian Huxley insightfully expressed the way that evolutionary processes are awakening within many of us.[109]

But this light is not like the diffuse light of the Sun or a light bulb. Rather, it is more like the coherent light of a laser beam, enabling us to see with self-reflective Intelligence—the eyesight of Consciousness—a holographic view of the Cosmos, in which every part contains an image of Wholeness in various levels of detail. Ultimately, all these details disappear in an involutionary process, when we experience Consciousness as a seamless continuum, with no divisions or borders anywhere.

Of course, such a worldview is not new, for it is ever present to those with the necessary sensitivity. For instance, this is how William Blake beautifully described such a holographic way at looking at Totality in *Auguries of Innocenc*e:

> *To see a world in a grain of sand,*
> *And a heaven in a wild flower,*
> *Hold infinity in the palm of your hand,*
> *And eternity in an hour.*

We can call the coherent light of Consciousness *Collumination*, from Latin *cum* 'together with' and *lumen* 'light', on the model of *illumination*. Furthermore, we can call the ability to create such a holographic image *collumination*, the skill of combining thinking or cogitation with a meditation practice such as vipassana or insight meditation. The distinction here is that when practising vipassana the focus of attention is on an object, such as the breath, aimed at stilling the mind, while when colluminating, practitioners watch the creation of their own thoughts arising from their Divine Source, aimed at healing the fragmented mind.

Secondly, Consciousness can be viewed as a vast Ocean, a great ball of water of infinite radius. To give this Ocean some structure, we can abstract any particular physical universe from it as the surface of the ball. The depths then represent the Cosmic Psyche, with its centre being the Divine Source of everything that exists in the relativistic world of form. This metaphor is a three-dimensional extension of David Bohm's notion of the holomovement, an undivided flowing movement with which he reconciled the incompatibilities between quantum and relativity theories.[110] The True Nature, Authentic Self, and Genuine Identity that we all share is the entire Ocean of Consciousness. Only secondly, what we call human nature or our individual identity is represented by the waves and currents on and beneath this vast Ocean.

As we have thus established God as a scientific concept, both cognitively and experientially, we now have irrefutable proof that humans are Divine, Cosmic beings and not machines, as Turing and many of his followers believed and believe. But we are now living in an utterly different Universe from that which is studied in schools and universities today. For the Absolute provides both the overall Context and Foundation for all our learning. Indeed, by regarding the **Datum** as the most basic of primal concepts, IRL provides not only a system of coordinates for all our learning, it also shows that Consciousness is the Cosmic Context and Gnostic Foundation for all our lives, with Love being the Divine Essence or Cosmic Soul at the centre of the Ocean of Consciousness, which is Reality, that which we all share, whether we know this or not.

In other words, the entire physical universe of space, time, and matter is just an appearance in Consciousness, not real at all. So what David Chalmers called the 'hard problem' of consciousness studies in 1995 cannot be solved: "How can we explain why, in principle, a neuronal system of *any* degree of complexity should give rise to the phenomenal *experience* of consciousness?"[111] For the brain emerges from Consciousness, not the other way round.

Indeed, we cannot really understand the complexity of our brains until we first understand our minds. For the most complex structure in the Universe is not the brain, as is often asserted; it is the Cosmic Psyche. This is obvious, because not only does the Cosmic Psyche map the brain, it maps the Totality of Existence, which is far more complex than the brain. But underlying all this complexity is a structure of the utmost simplicity: the Principle of Unity.

So it is a fundamental misconception to ask the physicists how the Universe is designed or to ask biologists—as students of life, from Greek *bios* 'life'—to tell us the meaning of life. As Carl Jung said in London in 1935, when giving the Tavistock Lectures on 'Fundamental Psychological Conceptions', psychology is the science of consciousness.[112] So, as Consciousness is primary, we must regard IRL—the genuine science of consciousness—as the primary science, not physics or biology, sometimes attempting to usurp physics' throne.

What this means is that if just this volume of the *Wholeness* trilogy on *Integral Relational Logic* were ever published, it would create the biggest revolution in science in the history of

human learning, far greater than those introduced by Newton, Darwin, and Einstein combined. For then we would be able to answer a question that is not on the agenda of any university, scientific research institute, technological research and development division, or governmental agency anywhere in the world, as far as I can tell: "What is causing scientists and technologists, aided and abetted by computers, to drive the pace of evolutionary change at unprecedented rates of acceleration?"

The Singularity in time

It is absolutely essential that we answer this question, for evolution is currently passing through the most momentous turning point in its fourteen billion-year history, a situation that directly affects every child, woman, and man on Earth. Otherwise, we must inevitably live our lives in darkness and ignorance, hardly living up to the name that we have given our subspecies: *Homo sapiens sapiens* 'wise-wise human'.

However, this volume on IRL does not provide a full explanation. This is described in the first two chapters of Volume Two on *The Unified Relationships Theory*: Chapter 5, 'An Integral Science of Causality' on page 483 and Chapter 6, 'A Holistic Theory of Evolution' on page 521. And how we all might intelligently adapt to our rapidly changing environment is examined in some depth in the last two chapters of Volume Three on *Our Evolutionary Story*: Chapter 13, 'The Prospects for Humanity' on page 1027 and Chapter 14, 'The Age of Light' on page 1131.

In the meantime, the next three sections of this Prologue on IRL, which provides the Context, framework, and Foundation for a comprehensive model of the psychodynamics of the whole of society, outlines some of the central issues here. This model arises directly from the modelling methods of information systems architects in business, seeking to replace as many jobs currently performed by humans with machines as possible. Understanding this model is essential, for there is immense resistance in society today to adapting to the changes that are happening, not the least from the scientists, technologists, and business executives who are blindly driving all this change.

The key point here is that evolution is essentially an accumulative process, as we see from the definition on page xxxiv, simply expressible in the exponential function e^x in mathematics. This is an extremely powerful function, for not only is its rate of change exponential. Its rate of acceleration, the rate at which acceleration changes and accelerates, and so on are also exponential. So the exponential function well describes the accelerating pace of evolutionary change we are experiencing today.

It was David Attenborough's enthralling television series *Life on Earth*, broadcast by the BBC in 1979, which graphically brought the exponential rate of evolutionary change to my attention. It is now some 3.6 billion years since the first self-reproducing forms of life ap-

peared on this planet. So if we consider 10 million years to be a day, we can map the whole of evolution on this planet to the days of the year.[113]

Using this model, if 1st January marks the birth of single-cell organisms, then the first multicellular organisms appeared in the middle of August, with sexual reproduction beginning about six weeks later. Other significant events during the late autumn were the emergence of fish, land plants, and reptiles. Then about the 10th December, both mammals and dinosaurs appeared, with mammals surviving the mass extinction that occurred on Christmas Day, one of seven and nine mass extinctions of land and marine forms of life so far in the life of the Earth.[114]

This catastrophe enabled the primates to appear on Boxing Day, to be followed by the hominids four days later. Then on New Year's Eve, the first exemplars of the *Homo* genus appeared around teatime. The whole of human evolution has thus taken place during the evening of the last day of the year, with *Homo sapiens* being born about 23:59:30. As we rapidly approach midnight on 31st December, we can see that the whole of mental evolution has thus taken place during the last three or four seconds, with the computer age beginning less than a single tick of the clock earlier.

Since this series was broadcast, a few scientists have studied the exponential rate of evolutionary change, among them Peter Russell, who recognizes that Consciousness is Ultimate Reality,[115] and Raymond Kurzweil, who doesn't, believing that humans are machines and nothing but machines, albeit spiritual machines. He has thus suggested that humanity is rapidly heading towards a singularity in time, when "a $1,000 computer will match the processing power of the human brain."[116]

This notion of a singularity was proposed by Victor Vinge in a NASA paper in 1993 called 'The Technological Singularity'. As he said in his Abstract, "Within thirty years, we will have the technological means to create superhuman intelligence [in machines]. Shortly after, the human era will be ended." Continuing, Vinge said,

> From the human point of view this change will be a throwing away of all the previous rules, perhaps in the blink of an eye, an exponential runaway beyond any hope of control. Developments that before were thought might only happen in 'a million years' (if ever) will likely happen in the next century. … I think it's fair to call this event a singularity ('the Singularity' for the purposes of this paper). It is a point where our old models must be discarded and a new reality rules. As we move closer to this point, it will loom vaster and vaster over human affairs till the notion becomes a commonplace. Yet when it finally happens it may still be a great surprise and a greater unknown.[117]

Similarly, Hans Moravec believes that computers are the members of a new species—our 'mind children'—described by such words as *posthuman*, *postbiological*, or even *supernatural*, when "Intelligent machines, which will grow from us, learn our skills, and initially share our goals and values, will be the children of our minds."[118] As he says, "It is a world in which the

human race has been swept away by the tide of cultural change, usurped by its own artificial progeny."[119] He thus foresees an Age of Robots, saying, "The fourth robot generation, and its successors, will have human perceptual and motor abilities and superior reasoning powers. They could replace us in every essential task and, in principle, operate our society increasingly well without us."[120]

Thankfully, there are a number of other ways of viewing the singularity in time, which we can see when self-reflective Intelligence is liberated from its mechanistic conditioning.

For instance, Terence McKenna called the singularity 'Timewave Zero', a vision that was revealed to him in 1971, when he and his brother Dennis experienced an intense shamanic trance after ingesting some psychoactive mushrooms and drinking a beverage of *ayahuasca*.[121] Such an experiment is one way of becoming free of our mechanistic conditioning, at least temporarily, for as Ralph Metzner describes in *The Expansion of Consciousness*, "a psychedelic experience … typically leads to a more or less total deconstruction of one's worldview, the model of reality and of social relations that we have come to accept through our upbringing and education."[122]

Timewave zero is so-called because McKenna saw time as a union of opposites, human history progressing in fractal-like waves, with similar patterns of creativity and habit resonating with each other over different periods of time. The singularity would be reached when there are no longer any inhibitors to creativity, no paradigms, traditions, or dogmatic religious, scientific, or economic worldviews preventing evolution flowing with its full power. At this point, novelty and concrescence will reach a maximum and creativity could emerge without any inhibitions.[123]

McKenna adapted these concepts from Alfred North Whitehead's *Process and Reality*. When studying the concept of the Ultimate, Whitehead called the creative evolutionary process *concrescence*, from the Latin *cum* 'together with' and *crēscere* 'to grow', pointing out that creativity is the principle of *novelty*.[124] This growing together produces forms and structures that are quite new, that have never been seen before.

However, having become completely free of the past, McKenna still needed to find a way of expressing the sense of Wholeness that he was enjoying in a language that is inevitably based on the past. To do this, he turned to the sixty-four hexagrams in the *I Ching*, the 'Book of Changes'. Using the King Wen sequence of these symbols, he created a set of differences and different differences between the transitions from one symbol to the other, which he called the 'eschaton', from Greek *eskhatos* 'last', also the root of *eschatology*. Using these differences as data points, Robert Meyer then developed a fractal algorithm in which to display McKenna's vision on a computer display.[125]

But when does this algorithm tell us that the singularity in time will be reached? Well, it does not do so directly. Rather, McKenna and his brother used the Timewave Zero diagrams

to find the best match to actual moments of novelty in human history. This mapping exercise led them to 22nd December 2012 as the 'end date', for this provided "good agreement between the events that comprise the historical record."[126] They later discovered that this date is the first day after the end of the Mayan calendar, which provides another way of looking at the singularity in time, for this calendar is uniquely exponential in character.

Apart from the shortest cycles, which are affected by the number of days in a year, the Mayan calendar consists of a series of thirteen cycles, each term in the series being twenty times longer than the previous one going backwards in time. In other words, each period in this geometric series is twenty times shorter than the previous one forwards in time.

Carl Johan Calleman of Dalarna University in Sweden used this exponential property to map the beginning of each period to major evolutionary turning points, thus demonstrating the accelerating pace of evolution, whose latest manifestations we are all experiencing today. For instance, he mapped two cycles to the most recent big bang and the start of the industrial revolution in the middle of the eighteenth century. He also mapped the beginning of the 5,125-year Great Cycle, which is 88,920 days long, to the first writing that has been discovered: a set of accounts set in clay in Uruk (modern Erech) in Mesopotamia, which generally marks the birth of history around 5,000 years ago.

However, the Mayan evolutionary model has one fundamental flaw, which Nick Hoggard spotted when Carl Johan gave a talk to the students at the Holma College of Holistic Studies in southern Sweden in 1999. Because the Mayan calendar is vigesimal, diminishing by a factor of twenty at each stage, the second term in the series maps to the first animals, an advanced form of life, omitting the birth of self-reproducing forms of life, mistakenly understood as the origin of life on Earth.

Nick saw that he could rectify this omission by taking the reciprocal of $\sqrt{20}$, which is 4.472, rather than that of 20. Furthermore, many other major points could be interpolated, giving a more accurate model. But could this model be developed as sound science using generally accepted techniques? Yes, indeed, it could, for 4.472 is reasonably close to 4.669, the Feigenbaum constant in chaos theory, the dual of complexity theory.

So Nick saw that we could use the bifurcations of chaos theory to model all evolutionary processes. He was not the first to use systems theory in this manner, for the Soviet dissident Valentin Turchin had explored the history of evolution in terms of cybernetics in *The Phenomenon of Science* in 1977, the title inspired by Pierre Teilhard de Chardin's *The Phenomenon of Man*. Figure P.7 provides a summary of Nick's evolutionary model on a logarithmic scale, which I have slightly modified from my own investigations.

Now the key point about this diagram is that it illustrates that an infinite geometric series of diminishing terms has a finite limit. For instance, when the factor is ½, the limit is 2, depicted here:

$$1 + \frac{1}{2} + \frac{1}{4} + \frac{1}{8} + \frac{1}{16} + \ldots = 2$$

To see what this model means for every human being living on the planet, born and yet to be born, Nick illustrated this model with another example of bifurcation in chaos theory: a dripping tap. When a tap is first turned on, it drips slowly, one drip at a time. But gradually, as it is opened up, it drips faster and faster, with the distance between the drops varying in a bifurcating manner. Eventually, these distances become zero, and the tap is turned full on.

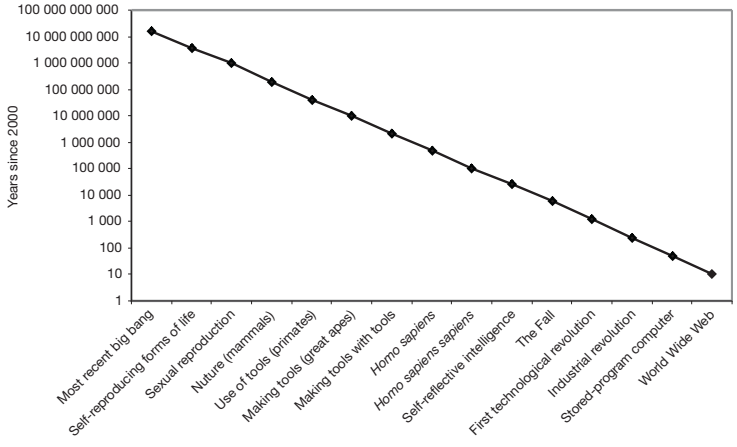

Figure P.7: *Major evolutionary turning points*

Much the same has been happening to evolution since the most recent big bang 13.7 billion years ago. The major evolutionary turning points that we are able to see are like the drops in a dripping tap as it is opened up. As the evolutionary tap is now turned full on, there are no longer any further evolutionary turning points to be discerned. In chaos theory, the point at which water flows through the tap continuously, without any breaks, is known as the accumulation point. Similarly, as evolution is an accumulative process, it has an accumulation point. But when is this singularity in time going to be reached?

Well, Kurzweil and Vinge think that the technological singularity will be reached in the next decade, when computers will able to perform over half the jobs currently being done by humans more efficiently, effectively, and cheaply. In contrast, Barbara Max Hubbard and her agents for conscious evolution think that this momentous day was reached on 22nd December 2012, when a 'Universal Humanity' was born, to grow and develop in the years to come.

However, chaos theory points to a much earlier day in 2004, a simple calculation of spurious accuracy for this is not an exact science. For instance, we cannot pin the beginning of the industrial revolution to a particular day. Nevertheless, this date matches well with my own experiences. While I cognitively realized that I had reached the Omega Point of evolution in 1982 and 83, it wasn't until the early years of this century that I experienced a series of cathartic satoris in the mountains of Norway and the forests of Sweden, thus providing irrefutable sci-

entific evidence for the cosmogonic evolutionary model that had been emerging within me for the previous two decades. In just twenty to thirty years, my life has recapitulated fourteen billion years of evolution and involution, from Alpha to Omega and back again.

So what does this evolutionary model, described in much more detail in Chapter 6, 'A Holistic Theory of Evolution' on page 521, tell us about the future of the human race? Well, Teilhard's four-stage model of evolution, which Peter Medawar called an 'incoherent rhapsody', provides us with a wonderfully harmonic view. Teilhard saw evolution in four major stages, which he called Prelife, Life, Thought, and Superlife corresponding to the physical, biological, noological, and spiritual spheres.

From our perspective on Earth, the transition between hylogenesis and biogenesis took about a billion years, ending about 3.5 billion years ago, and the transition between biogenesis and noogenesis took about 20,000 years, during what is called the Great Mother Goddess epoch, ending at the start of the patriarchal epoch about 5,000 years ago. Today, we are clearly in the middle of the third transition period of about 100 years, which began in the 1960s with the countercultural movement in California, leading to the great Spiritual Renaissance we are witnessing today.

But what will the eschatological epoch be like, prophesied by all the religions, especially those with a linear view of time? Where are we all heading as a species? Well, Teilhard foresaw that this transition point would be marked when all the divergent streams of evolution converge at the Omega Point, in what David Paul Boaz, founder director of the Buddhist Copper Mountain Institute, calls a noetic revolution.[127] Such a momentous event would mark the most fundamental change in human evolution for we would then see that it is in all our interests to cooperate with each other, rather than fighting and competing with each other, as we have been doing since the dawn of history. As Teilhard said,

> The way out for the world, the gates of the future, the entry into the superhuman, will not open ahead to some privileged few, or to a single people, elect among all peoples. They will yield only to the thrust of *all together* in the direction where all can rejoin and complete one another in a spiritual renewal of the Earth.[128]

However, Teilhard himself never reached the Omega Point of evolution. So he could not write about what he called the 'Ultimate Earth' from his own impersonal mystical experience, free of his anthropocentric religious and scientific conditioning. While Teilhard saw that the terms *Alpha* and *Omega*—as used in the Book of Revelation—refer to God and the universal Christ at the end of time,[129] he did not see that in order for humanity to reach evolution's glorious culmination, we need to pass through an apocalyptic death and rebirth process and start afresh at the very beginning. Indeed, like so many today, he was averse to such a necessity.

So while the Unified Relationships Theory provides a clear picture of humanity's ultimate destiny as a species, how many people will be able to see this picture before the imminent collapse of the global economy is most uncertain. For to do so, children need to question all the belief systems of their parents, totally transforming the cultural-cognitive cycle that governs our lives today. For as Max Planck sadly remarked, "a new scientific truth does not triumph by convincing its opponents and making them see the light, but rather because its opponents eventually die, and a new generation grows up that is familiar with it."[130]

Transforming the cultural-cognitive cycle

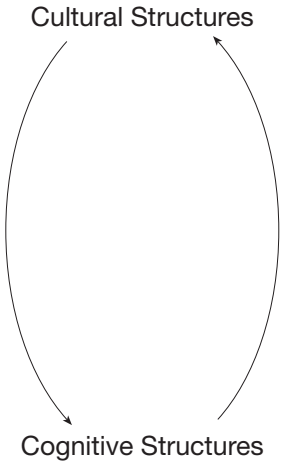

Figure P.8: *The cultural-cognitive cycle*

Figure P.8 illustrates the central issue here. As children, we learn what our parents and teachers want us to learn, in church and at school and university, carrying this learning into the workplace. Each generation thus passes on to the next generation what they have learned from the previous generation, a cyclic process that has been going on for some 25,000 years and more.

Then during the 5,000 years of the patriarchal epoch, which began at the dawn of written history and the first city-based civilizations, our cultural worldviews have become increasingly set in concrete, inhibiting us from intelligently adapting to the accelerating pace of evolutionary change being driven by scientists and technologists, aided and abetted by computers.

So rather than being free to develop a coherent worldview that truly corresponds to our experiences, we are trapped in what William Blake aptly called our 'mind-forged manacles' in his illuminated poem *London*, published in *Songs of Experience* in 1794, a tragic situation that affects all strata of society:

> *I wander thro' each charter'd street*
> *Near where the charter'd Thames does flow,*
> *And mark in every face I meet*
> *Marks of weakness, marks of woe.*
>
> *In every cry of every Man,*
> *In every Infants cry of fear,*
> *In every voice, in every ban,*
> *The mind-forg'd manacles I hear.*[131]

We find ourselves in prison cells today because our individual ontogenies recapitulate mental phylogeny, our behaviour patterns being well established by the age of five or even earlier. So the institutions that govern our lives are the products of these rigid cognitive struc-

tures, which, in turn, inform what and how we learn. For our minds create our reality and govern our behaviour. This means that the phylogeny of *Homo sapiens sapiens*, or of any culture or subculture, is actually the synthesis of all our individual ontogenies.

Now, if we are to open to the Totality of Existence and Experience, we need to awaken to Total Revolution, severing the cycle between these inhibiting cultural and cognitive structures. For, as Vimala Thakar has said, "In a time when the survival of the human race is in question, continuing with the status quo is to cooperate with insanity, to contribute to chaos." She therefore asks, "Do we have the vitality to go beyond narrow, one-sided views of human life and to open ourselves to totality, wholeness?" For as she says, "The call of the hour is to move beyond the fragmentary, to awaken to total revolution."[132]

In a similar fashion, Eckhart Tolle said in *Stillness Speaks*, an inspiring book of aphorisms:

> The transformation of human consciousness is no longer a luxury, so to speak, available only to a few isolated individuals, but a necessity if humanity is not to destroy itself. At the present time, the dysfunction of the old consciousness and the arising of the new are both accelerating. Paradoxically, things are getting worse and better at the same time, although the worse is more apparent because it makes so much 'noise'.[133]

It is in this rebellious way that we could awaken to Total Freedom, becoming free of the world that our parents and their generation lived in, fighting Holy wars, wars about the Whole. Phylogeny would then recapitulate ontogeny, rather than the other way round, as is normal, enabling a new civilization or species to emerge.

In Arnold Toynbee's monumental *A Study of History*, Toynbee identified some twenty major civilizations that have been born and died during the 5,000-year patriarchal epoch, summarizing the reason for the death of civilizations in this way:

> The nature of the breakdowns of civilizations can be summed up in three points: a failure of creative power in the minority [the leaders who originally brought the civilization into being], an answering withdrawal of mimesis on the part of the majority, and a consequent loss of social unity in the society as a whole.[134]

In *The Ghost in the Machine*, Arthur Koestler gave an explanation of how new species can emerge with the words *gerontomorphosis* 'the shaping or forming of the old'[135] and *pædomorphosis* 'the shaping or forming of the young'.[136] During gerontomorphosis, evolution progresses from immediately preceding forms and structures, when ontogeny recapitulates phylogeny. However, as Koestler puts it, "gerontomorphosis cannot lead to radical changes and new departures; it can only carry an already specialized evolutionary line one more step further in the same direction—as a rule into a dead end of the maze."[137]

During pædomorphosis, on the other hand, evolution retraces its steps to an earlier point and makes a fresh start in a quite new direction. Pædomorphosis is thus a rejuvenating, renascent process; it leads to new vitality, new energies, and new possibilities.[138]

These principles of pædomorphosis and gerontomorphosis apply equally in the noosphere, the prime example being the Copernican revolution in the seventeenth century. For Copernicus effectively went back to Aristarchus' heliocentric view of the solar system, Aristarchus being called the Greek Copernicus,[139] abandoning Aristotle and Ptolemy's geocentric view, which was generally accepted at the time. And generally, this process does not begin on the scale of the species; it begins at the individual level, breaking the cultural-cognitive cycle that drives so much human learning today.

A number of visionaries have seen that a new civilization or even a new species is emerging. For instance, after Eckhart Tolle wrote in *A New Earth*, "We are a species that has lost its way,"[140] he ended this book with these sentences: "A new species is arising on the planet. It is arising now, and you are it!"[141] To give this superintelligent, superconscious species a name, Osho called it simply *Homo novus* or Zorba the Buddha, representing a new synthesis of East and West, the meeting of all polarities.[142] As he said, "The new man is not an improvement upon the old; he is not a continuous phenomenon, not a refinement. The new man is the declaration of the death of the old, and the birth of an absolutely fresh man—unconditioned, without any nation, without any religion, without any discriminations of men and women, of black and white, of East and West, or North and South."[143]

And Barbara Marx Hubbard, founder of the Foundation for Conscious Evolution, the Evolutionary Edge, and Birth 2012, and leader of Agents for Conscious Evolution (ACE), has suggested these names for our emerging species: *Homo universalis*, *Homo noeticus*, *Homo spiritus*, and *Homo sapiens sapiens sapiens*,[144] indicating that this is not a biological species but a psychospiritual one. For myself, the term I prefer is *Homo divinus* to denote that humanity is currently in the transition from the mental-egoic age (me-epoch) to the age of universal spirituality (us-epoch), transforming fear and ignorance into love and intelligence and hence competition into cooperation. We can distinguish two subspecies here to denote the two ways of returning Home to the Unmanifest: *Homo divinus divinus* and *Homo divinus universalis*, returning Home to Oneness and Wholeness, respectively. In contrast, we can call the predominant psychospiritual species *Homo divisionis*, out of touch with Reality, living in fear and ignorance.

However, returning Home to Oneness is clearly not sufficient. As mentioned on page xlvii, the most urgent problem facing humanity today is to heal our fragmented minds in Wholeness. And for this to happen, evolution needs to become more convergent than divergent. So if we are to cocreate a viable society based on the seven transcultural, transdisciplinary pillars of wisdom, recognizing that we are not separate from the Divine, Nature, or each other for an instant, we need to transform today's fragmented cultural-cognitive cycle, rebuilding our cultural structures on the Truth, in harmony with the fundamental laws of the Universe.

Astronomia Nova '*New Astronomy*', which Johannes Kepler wrote at the beginning of the seventeenth century, laying down the foundation of modern astronomy, illustrates what is needed here. In Part I, Kepler dispassionately examined the mathematical merits of three competing models of the solar system: the geocentric and heliocentric models, and a compromise between the two, in which the inner planets revolve around the Sun with the Sun and these planets circling the Earth. Kepler was well aware in this exercise that he was not viewing the solar system as an objective reality, separate from himself, but as three distinct mental models. Mathematically, Kepler saw little to distinguish these models; each had their merits and demerits. However, when he unified mathematical astronomy with causal physics, which Aristotle had separated in *Physics*,[145] he was able to show that all the planets revolve around the Sun in ellipses, with the Sun at one of the focal points.

It might seem that Kepler's genius would have been recognized immediately. But it wasn't. In *Dialogue on the Two Chief Systems of the World*, published twenty-three years after *New Astronomy* in 1632, Galileo claimed that he had 'conclusive physical proof' for the heliocentric worldview.[146] But having refused to read Kepler's book, he hadn't, for he was still clinging to Ptolemaic and Copernican epicycles. Accordingly, Galileo got into deep trouble with the Catholic authorities, being sentenced to luxurious house arrest, which enabled him to write *Dialogues Concerning Two New Sciences*, laying down the foundations of terrestrial dynamics and the science of materials.[147]

This episode illustrates that even abstract mathematical models are culturally induced, often psychologically associated with the people who originated them. For instance, the three models that Kepler examined were associated with Aristotle and Ptolemy, Aristarchus and Copernicus, and Herakleides and Tycho Brahe, respectively. Each was considered the author of these models, from Latin *auctor* 'creator, originator', from *auctus*, past participle of *augēre* 'to increase, originate, create', also the root of *authority*, *augment*, and *auction*. In comparison, the word *authentic* derives from Greek *authentikos* 'principal, genuine', from *authentēs* 'doer, master, author, one acting on one's own authority', from *autos* 'self' and *hentēs* 'worker, doer'.

The central issue that arises from these etymologies is that most people base their authentic sense of security and identity on the authority that is given to them by their mental models, whether created by themselves or introjected from some external authority. So when people do not know that the Authentic Self that we all share is Wholeness, to question the assumptions that lie behind these models in order to heal the fragmented mind can feel very threatening.

David Bohm attempted to address this problem with his proposals for open dialogue in groups of people. For as he said around 1985, when being interviewed on Krishnamurti's enlightened approach to education, if we do not let go of our prejudices, questioning all our assumptions and preconceptions, then humanity is not a viable species. The initiating pro-

posal for dialogue, which he wrote with Donald Factor and Peter Garrett, states, "In Dialogue, a group of people can explore the individual and collective presuppositions, ideas, beliefs, and feelings that subtly control their interactions." They even suggested that this questioning way of communicating should come under scrutiny "as a kind of 'meta-dialogue', aimed at clarifying the process of Dialogue itself".[148] Lee Nichol then edited a posthumous summary of Bohm's thoughts on dialogue, saying in his foreword, "Such an inquiry necessarily calls into question deeply held assumptions regarding culture, meaning, and identity".[149]

However, Bohmian dialogues don't really help those destined to repeat the experiment in learning described in this book. This is because the primal concept of **Being** acts as the superclass of concepts, including all beliefs, theories, ideas, and opinions. So as mentioned on page xlv, panosophy is not a cosmology or worldview that can be compared with any other, for it is all-inclusive. Furthermore, the apparent author of this book is not actually the author. The True Originator of this book and every other book that has ever been written is the Divine, viewed as Wholeness and Consciousness.

For myself, in regarding myself as a computer that switches itself off and on again so that it has no external authorities to tell it what or how to learn, I have disembodied all the concepts that form the Cosmic Context, coordinating framework, and Gnostic Foundation for the Unified Relationships Theory. As such a thought experiment is not generally acceptable by society today, I have, of necessity had to spend most of my life isolated from my fellow human beings. For as Anthony Storr says in *Solitude*, "The majority of poets, novelists, composers, and, to a lesser extent, of painters and sculptors, are bound to spend a great deal of time alone," quoting Edward Gibbon as saying, "Conversation enriches the understanding, but solitude is the school of genius; and the uniformity of a work denotes the hand of a single artist."[150] And to quote Krishnamurti again, "It is no measure of health to be well-adjusted to a profoundly sick society."[151]

The spectrum of consciousness

To examine more closely what role IRL could play in the transformation of culture and consciousness, we can best do this in the context of Ken Wilber's three-tier, twelve-stage spectrum of consciousness, which he began to study in 1977 with the publication of *The Spectrum of Consciousness*. So Ken's integral philosophy has been evolving in parallel with Integral Relational Logic during the past thirty-five years, with the latter being influenced by the former, but apparently not the other way round. Figure P.9 provides an overview of this spectrum, a synthesis of several major lines of human development, with some modifications and additions.[152]

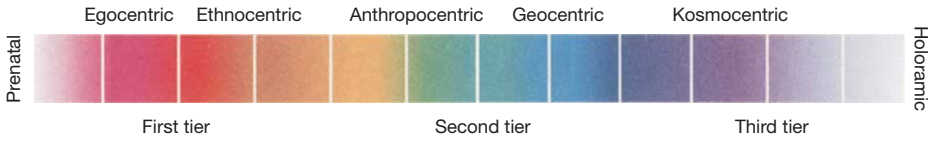

Figure P.9: *The spectrum of consciousness*

The main omissions, in my experience, are at the beginning and end. In particular, the spectrum does not include the pre- and perinatal domain, as Stanislav Grof points out in an article in *Ken Wilber in Dialogue*.[153] For instance, in the Preface to *Integral Life Practice* from 2008, which Ken describes as a 'second-tier practice', he says, "Developmental models are in general agreement that human beings, *from birth*, go through a series of stages or waves of growth and development." [my emphasis][154]

After birth, what these lines of development indicate is that our sense of identity changes over time, as we grow outwards and die inwards. So, even though there is only one True Identity that we all share, there are many different levels of personal identity. At the lowest level is an egocentric identity, where the emphasis is on our unique bodies and minds. The next level is ethnocentric, such as that shared by nations and religions, such as Chinese and Christianity. Ken Wilber calls these two levels the first tier in his spectrum of consciousness.

He then calls the second tier worldcentric,[155] which perhaps would be better as *mundocentric*, from the Latin *mundus* 'world', cognate with *mundane* 'secular, ordinary'. However, we can see different levels of identity here too. When we identify with *Homo sapiens sapiens* to the exclusion of the other species, we can call this an anthropocentric identity. Then there is the mechanistic identity that some share with stored-program computers as knowledgeable, information-processing beings. Broadening further, we also have a geocentric identity that includes the other animals, living beings, and even rocks as Earthlings dwelling on our beautiful planet Earth, as well as Gaia, as a living being, itself.

At the other end of the spectrum, Ken calls the third tier kosmocentric and his friend and colleague Andrew Cohen calls it cosmocentric,[156] meaning "an identification with all life and consciousness, human or otherwise, and a deeply felt responsibility for the evolutionary process as a whole … an emergent capacity, rarely seen anywhere".[157]

In *Sex, Ecology, Spirituality* from 1995, in a chapter called 'The Depths of the Divine', Ken calls the four levels of the third tier 'Psychic', 'Subtle', 'Causal', and 'Nondual',[158] while in *Integral Spirituality* from 2006, he calls these levels 'Illumined Mind', 'Intuitive Mind', 'Overmind', and 'Supermind'.[159] But in my experience, Supermind and Nonduality mark the culmination of two distinct processes taking place in the Eternal Now: the evolutionary and involutionary, following the upward and downward arrows in Figure P.3 on page xxxiii, towards Wholeness and Oneness, respectively.

So it seems that he has conflated these two paths, omitting what I call the all-inclusive Holoramic perspective, which embraces all the various tiers and levels in the spectrum of consciousness. This is a widespread confusion within the evolutionary movement, for reasons that we need to look at.

To keep this simple, we can look just at the relationship between the first and second tiers in the spectrum of consciousness. The key point is that first-tier consciousness determines the economic laws that govern our lives and defines the curricula for how we educate our children, both of which are based on the seven pillars of unwisdom. The democratic majority thus seeks to maintain the status quo, called homeostasis 'same state' in systems theory. In this respect, there is little difference between Chinese political leaders seeking stability and Christian fundamentalists in the USA seeking autosoteria 'self-preservation', from Greek *autos* 'self' and *sōteria* 'salvation, preservation', from *sōtēr* 'saviour, preserver, deliverer', from *sōs* 'safe and sound, healthy, entire; sure'.

So, despite the enthusiasm of the second-tier for a new society, they are still being held back by the fearful democratic majority. It is not surprising, therefore, that Alexis de Tocqueville pointed out in the middle of the nineteenth century that democracies are the tyranny of the majority or masses,[160] which John Stuart Mill further explored in *On Liberty*. As he said:

> In general, opinions contrary to those commonly received can only obtain a hearing by studied moderation of language and the most cautious avoidance of unnecessary offence, from which they can hardly ever deviate even in a slight degree without losing ground, while unmeasured vituperation employed on the side of the prevailing opinion really does deter people from professing contrary opinions and from listening to those who profess them.[161]

People living predominantly with second-tier consciousness need to bear this situation in mind, realizing that while political conservatism, seeking self-centred, individual freedom, is an entirely natural phenomenon, to be respected, it is not a viable way of living at these times of unprecedented accelerating evolutionary change. Rather, free-thinking people tend to have more liberal political views, taking a broader, more tolerant view of humanity, from Latin *līber* 'free', from PIE base **leudh-* 'to grow'. So those who call themselves evolutionaries generally fall into the second tier in the spectrum of consciousness.

Carter Phipps, formerly editor-in-chief of the *EnlightenNext* magazine, tells us that several people independently coined the word *evolutionary* as a play on *revolutionary*, for "evolutionaries *are* revolutionaries." In contrast, *evolutionist* means 'a person who is an adherent to the Darwinian theory of evolution', opposite to *creationist* 'a person who denies the existence of evolutionary processes'. For Carter, evolutionaries have three critical characteristics:

1. They are cross-disciplinary generalists.

2. They are developing the capacity to cognize the vast timescales of our evolutionary history.
3. They embody a spirit of optimism.[162]

However, while the evolutionaries are loosening ties with the prevailing culture, they have not completely severed the dominant cultural-cognitive cycle, still functioning for practical purposes within the economic and educational infrastructure of Western civilization, which has to die if we are to intelligently and consciously reach the Omega Point of evolution as a species.

Furthermore, the evolutionary movement also has autosoteric tendencies, despite its innovative activities, encapsulated in such slogans as 'The next Buddha is the sangha' and 'Birthing a new we'. As people like to belong to groups with a finite, fragmented identity, there is thus a strong emphasis on consensual thinking, on what Ken Wilber calls intersubjective consciousness. Like a flock of migrating birds, the entire movement acts as one, with the leaders of the coterie endorsing each other's books. If one member of the group makes a slight change in direction, the entire group follows the 'flavour of the month'. In practical terms, evolutionary leaders would not be able to sell books or fill conference halls if they did not write and say what their readership and audience wanted to read and hear. This is the basic supply and demand cycle of all economic systems.

And when people are members of such a group, it is extremely difficult to stand outside to see what is going in within the group. So just like any other homeostatic structure, the evolutionary movement tends to reject ideas that don't fit into its overall paradigm. The prime example of such self-preserving tendencies is the immune response of the body, which cannot normally detect the difference between life-threatening organisms and life-saving organ transplants. Other examples are a herd of antelopes rejecting an albino born into its midst or children in a school playground bullying those who do not fit in.

So, in general, evolutionary pioneers do not know that evolution and involution are carrying us Home to Wholeness, the Alpha and Omega Points of the Universe, where true Love and Peace are to be found. The central issue here is that people are not generally aware of the two distinct ways of returning Home to the Unmanifest, depicted by the upward and downward arrows in Figure P.3 on page xxxiii.

As Joseph Campbell says, those following the downward path reach it in apotheosis, at the end of the second stage of the hero's journey, when seekers realize their Divinity, from Greek *apotheoun* 'to deify', from *apo-* 'change' and *theos* 'god'. So living in the bliss of Oneness, why should they follow the third stage in the monomyth: the return to society. As he says, "The return and reintegration with society … is indispensable to the continuous circulation of spiritual energy into the world." However, "the hero himself may find [this] the most difficult requirement of all."[163] Campbell gives three reasons for the hero's predicament:

1. The bliss of this experience may annihilate all recollection of, interest in, or hope for, the sorrows of the world; or else the problem of making known the way of illumination to people wrapped in economic problems may seem too great to solve.
2. The powers that he has unbalanced [on his journey to Freedom] may react so sharply that he will be blasted from within and without—crucified.
3. The hero may meet with such a blank misunderstanding and disregard from those he has come to help that his career will collapse.[164]

On this third point, "Even the Buddha … doubted whether the message of realization could be communicated." And on the first point, "Saints are reported to have passed away in the supernal ecstasy."[165] For these three reasons, Campbell says that the responsibility of returning to the world with the adventurer's life-transmuting trophy when the hero-quest has been accomplished has been frequently refused.

One who hasn't refused this call is Andrew Cohen, who said in *Freedom Has No History* in 1997, "To succeed, we must be prepared to do battle with the powerful conditioning, conscious and unconscious, of the whole race. That means we have to come out from the shadows and be seen. Like Atlas, we have to be willing to hold up the whole world on our shoulders. It's an awesome task."[166]

Since then, Andrew has expanded on what this means, as much as a social activist as a spiritual teacher. As he says in *Evolutionary Enlightenment*, published in 2011, "*This spiritual impulse moves in two directions simultaneously*." Continuing, "The path that most mystics in the enlightenment tradition have taken is not the future-oriented one; it is the perennial meditative path that countless seekers have followed for millennia in the pursuit of spiritual illumination," in the timeless.[167]

However, as Andrew is realizing, this is not sufficient. As he says, "I believe the spiritual impulse today is calling us not away from the world but toward that big next step we need to take *in* our world." For once we have found the Truth, "We will find ourselves compelled not to rest there, but to reenter the fray of the creative process."[168]

Sadly, however, Andrew has confused the horizontal and vertical dimensions of time. Despite appearances to the contrary, in Reality creativity takes place in the Eternal Now, culminating in Wholeness at evolution's Omega Point. But this is perhaps the most unpopular idea on this planet at the present time, for there is a widespread belief that we human beings can continue to create ideas and progeny indefinitely, or at least into the foreseeable future, for hundreds and thousands of generations.

The reason for this delusion, of course, is the incredible difficulty in intelligently assimilating the Principle of Unity into consciousness, for to do so, all attachments to a personal, or even human, identity need to disappear. So while Integral Relational Logic is simple com-

monsense, it can only really be understood with Eastern mystical awareness, taking us into the third tier in the spectrum of consciousness and beyond.

The all-inclusiveness of IRL

As IRL, the Cosmic Context, coordinating framework, and Gnostic foundation for the Unified Relationships Theory, is such a strange animal, maybe it would help to understand what it means to be fully conscious of the way that we organize our ideas by looking at how it relates to the many other integrative and convergent movements taking place in the world today.

The central problem here is that because of the fragmented mind, out of touch with Reality, few understand the all-inclusiveness of this universal system of thought. As we see on page lxiii, because people tend to identify ideas with people, they believe that their apparent authors are individual human beings, not seeing that they are actually the products of some fourteen billion years of evolution and the collective consciousness. To illustrate this point, when the time is right, ideas can pop up in many different individuals independently, each thinking that they are the originators.

For instance, Isaac Newton and Gottfried Leibniz both invented the infinitesimal calculus in the second half of the 1600s, Charles Darwin and Alfred Russel Wallace independently came up with a theory of evolution based on natural selection in the middle of the 1800s, and in the early 1960s Paul Baran and Donald Davies on either side of the Atlantic simultaneously invented the network system of packet-switching on which the Internet is based.[169] So intellectual property laws, such as copyright, patent, and trademark, are particularly absurd. It is nonsense to believe that individual people are the creators of their works and can therefore 'own' them. In a fully awakened society, such laws would cease to exist. For there are no separate beings who can be said to own anything. As the Advaita sages say, there is no doership.

As many are realizing today, the time is right in evolutionary history for all the divergent streams of evolution to converge in Wholeness. To put IRL into perspective with these developments, we can perhaps best focus on Ken Wilber's integral philosophy, generally considered to be the most advanced synthesis in the world today. However, it is not comprehensive enough, for it cannot explain my own life experiences and those of humanity as a whole.

The basic reason for the limitations of Ken's Integral Model is that in *A Theory of Everything: An Integral Vision for Business, Politics, Science, and Spirituality*, he asks, "Can there be a genuine Theory of Everything? Does it even make sense to ask this question? And where would we begin?" Well, in conformity with the Principle of Unity, we would begin at the end, of course, at the Origin of the Universe, which is within us all—the Divine Source of Life bubbling up from the Fountainhead in the Eternal Now. However, he then goes on to say:

> This book is a brief overview of a Theory of Everything. All such attempts, of course, are marked by the many ways in which they fail. The many ways in which they fall short, make unwarranted generalizations, drive specialists insane, and generally fail to achieve their stated aim of holistic embrace. It's not just that the task is beyond any one human mind; it's that the task is inherently undoable: knowledge expands faster than ways to categorize it. The holistic quest is an ever-receding dream, a horizon that constantly retreats as we approach it, a pot of gold at the end of the rainbow that we will never reach.[170]

Ken then goes on to ask, "So why even attempt the impossible?" To which he replies, "Because, I believe, a little bit of wholeness is better than none at all, and an integral vision offers considerably more wholeness than the slice-and-dice alternatives."[171] Ken seems to be saying here that Wholeness is like an asymptote in mathematics, which can be approached but never reached in finite time.

In a similar fashion, in a critical appreciation of Ken Wilber's *Collected Work*s, Christian de Quincey asserted in 2001, when the managing editor of the *Noetic Sciences Review*, the journal of the Institute of Noetic Sciences, that the genuine theory of everything is impossible:

> Because you cannot create a model or a map that contains itself. Where, for example, would the four-quadrants model fit into the four-quadrants model? Mathematical and logical proofs developed by Bertrand Russell and Kurt Gödel—along the lines that no set of all sets can itself be a set of the same logical category, type, or level—invalidates the claim. Both Alfred Korzybski and Gregory Bateson immortalized this dilemma with the phrase "the map is not the territory." In this case (Wilber's TOE), not only the map, but more crucially, the consciousness that created the map, cannot be found in its own creation. To attempt to make room for it would involve us (and Wilber) in a logical infinite regress. This meta-critique applies to any TOE, of course, not just Wilber's.[172]

That is not my experience. Because the Western mind has a deep aversion to paradoxes, Russell spent the first two decades of the twentieth century with A. N. Whitehead fruitlessly attempting to find certainty in mathematics,[175] which is impossible, for the only certainty is to be found in the Absolute. In 1931, Gödel then proved in his incompleteness theorems that paradoxes cannot be avoided in the relativistic world of form, showing, in the process, that human, intuitive truth is more powerful than mechanistic, mathematical proof.[173]

Korzybski made his famous assertion because of the widespread belief among scientists that an objective reality exists independently of a knowing being. In full, he said, "A map *is not* the territory it represents, but, if correct, it has a *similar structure* to the territory, which accounts for its usefulness."[174] But no one has ever seen the physical universe in its entirety—supposedly objective reality—as we might see a rose at a glance, for instance. What we call the Universe is a construct of the mind. And what is true for the Universe is also true for everything within it. Our minds create our reality. Even the concept of rose is formed by comparing the data pattern we perceive with all other data patterns in our experience.

IRL also avoids the problem of infinite regress, just as the relational model of data in business does. In IRL, the epistemological level of the foundations can be expressed in terms of tables or mathematical relations, which can be represented within themselves, just like the system schema in relational database management systems, such as MySQL.

The key point here is that the self-inclusive map of the Universe in IRL is far deeper, broader, and simpler than Ken Wilber's Integral Map, which consists of five elements: **quadrants**, **levels**, **lines**, **states**, and **types**, which he emboldens to indicate that they are primal concepts,[176] just as **structure**, **form**, **relationship**, and **meaning** are bootstrap concepts in IRL. Ken calls these elements the 'patterns that connect', which collectively form a structure called AQAL, short for "all quadrants, all levels", which is short for "all quadrants, all levels, all lines, all states, all types".[177]

Ken also calls his Integral Model an Integral Operating System (IOS), using a metaphor from computer science. As he says, "In an information network, an operating system is the infrastructure that allows various software programs to operate,"[178] these programs often being called apps, short for applications, such as are popular on iPhones and iPads running iOS. To Ken, an IOS is "a neutral framework" that "can be used to bring more clarity, care, and comprehensiveness to virtually any situation".[179]

As Integral Relational Logic has emerged from a thought experiment in which I imagine that I am a computer that has the task of integrating all knowledge into a coherent whole, IRL can also be considered an Integral Operating System, for the ontological level of the foundations is a neutral, virtually meaningless framework applicable universally, prior to interpretation by a knowing being. However, there is a subtle difference. For IRL is more like a virtual machine operating system, such as IBM's VM, which can run many different operating systems, as I first saw in the early 1970s at IBM's laboratory near Winchester in England, than Microsoft's Windows or Apple's Mac OS X.

Using more familiar examples, IRL is a little like Apple's Boot Camp, which runs both Mountain Lion and Windows 7 on my MacBook Pro, but not simultaneously. To run Windows and Mac OS X simultaneously, we need an emulator, like Parallels Desktop, which can run many different versions of Windows, Linux, IBM's OS/2 Warp, and even Mountain Lion itself under Mountain Lion in Parallels Desktop Version 7. This is how my iMac is set up, although I don't actually run Mountain Lion under Mountain Lion. I simply use Parallels Desktop to run 32-bit Windows Vista and 64-bit Windows 7, which runs Adobe FrameMaker, which I am using to write this book on *Wholeness*. But if I were to run Mountain Lion under Mountain Lion, this would be like IRL including itself within itself, which philosophers like Christian de Quincey say is impossible, as we see on page lxx.

However, it is not. The development of IRL is like a television camera filming itself filming. This is not easy to describe, because it is like pulling yourself up by your own bootstraps,

which is why the bootstrap concepts in IRL are so called, as described in Section 'Getting started' on page xlix. This is possible because the ultimate pattern that connects is the Principle of Unity. This is why IRL can include itself in its own formation, as well as any other IOS, such as AQAL. For as we see page 239 in Chapter 3, 'Unifying Opposites', AQAL is just an instance of the Cross of Duality in the ontological level of the foundations of all knowledge.

So IRL contains AQAL as a subset, but this relationship does not apply the other way round. As another illustration, as IRL shows how we can bring all knowledge into universal order, anyone engaged in organizing an event, from a village fete to the Olympic Games, implicitly uses IRL, they do not use AQAL, for it is not sufficiently powerful. Again, NASA could not have sent astronauts to the Moon without the organizing power of IRL.

Unifying the inner and outer

Whatever happens to this book as a disembodied set of words and concepts, there remains a human being who has acted as a channel for the Divine behind them. So, while the central theme of my life has been to unify all opposites in Wholeness, in order to find Love, Peace, and Truth, I have one challenge remaining before this body dies: to unify my inner and outer worlds. It might seem that his problem has not yet been solved because it is as much a social and cultural issue as a personal one. However, as the whole of society is contained within me as Consciousness, what appears to be external hostility to the irrefutable truth of the Principle of Unity is actually an inner conflict, which I am constantly seeking to resolve.

Of course, in Reality, there are no problems to be solved, no questions to be answered. So in the overall scheme of things, it doesn't matter one jot or iota whether this particular situation will ever be resolved. Nevertheless, from an illusory human perspective, it would be nice if it were. So let us look at some of the issues involved here.

On the one hand, it is not too difficult today to live as a mystic, isolated from society in solitude, rather like a hermit or sadhu, but without the harsh asceticism. In this incredibly beautiful space, I do occasionally meet other mystics in instant joyful recognition, without a word being spoken. By looking lovingly and unflinchingly into each others eyes, there is the deepest and most intimate of all connections, beyond outer appearances: the body, mind, and even personal soul.

But I am also a scientist and businessman by profession, working to solve profoundly critical social problems. And therein lies the rub. Even though the Principle of Unity feels perfectly natural to me, this universal truth is so revolutionary in terms of Western thought that even the most free-thinking scientists and philosophers in the world have great difficulty in understanding the *Weltanschauung* presented in this book.

Nevertheless, as I see a scattering of both-and thinkers in the world today, I'm not without hope that the Principle of Unity, IRL, and the URT will be acceptable to a coherent group of at least some mystics, psychologists, philosophers, scientists, technologists, and business people ere long. And for this to happen, I need to complete the only task remaining for me in life: to unify my inner and outer worlds. This central problem in my life, which I have wrestled with since before I was born in 1942, has not yet been completely solved, so I am addressing it entirely on my own at present. But should I receive a positive response to what is being offered here, I would naturally revise some chapters in *Wholeness* to reflect this change in circumstances.

One who has given the practical issues facing humanity much thought is John L. Petersen, founder of the Arlington Institute in 1989, as a think tank to "serve as a global agent for change by developing new concepts, processes and tools for anticipating the future and translating that knowledge into better present-day decisions". Petersen is not a flaky New Ager, for he has formerly worked in various governmental and political positions in the USA, setting up a portal for what he sees as the World's Biggest Problems: Economic Collapse, Peak Oil, Global Water Crisis, Species Extinction, and Rapid Climate Change.[180]

As Petersen says in *A Vision for 2012*, we are currently entering a "historical, epochal change—a rapid global shift unlike any our species has lived through in the past. … There are no direction-pointing precedents for what is coming, … there is no one alive today who [has] lived through anything like what we're anticipating."[181]

The key issue here is which of two possible scenarios that John outlined in an interview in the June–August 2009 issue of *EnlightenNext* is more likely: "with the internet or without the internet". If you don't have the Internet, something really bad has happened, but with the Internet, the shock wouldn't be so disastrous as it would if it all came down. He went on to say:

> So we don't want a crisis that is so bad that it collapses the whole system. We want this kind of finely engineered middle-ground disruption to scare everybody, grab them by the lapels, and say, "We can't do this anymore!" It convinces everybody that they have to redesign their lives, but you don't lose the infrastructure. You can rebuild around something rather than rebuild the entire infrastructure.[182]

As the Internet is implicitly built on Integral Relational Logic, the commonsensical science of thought that we all use everyday, no matter what our cultural background might be, the Internet could provide the continuity we need as the financial infrastructure of society collapses around our ears.

The key point here is that money is a type of information and so can be represented in the semantic models developed by information systems architects. But this is not possible the other way round. The meaning of information, and hence its value, cannot be satisfactorily represented in the quantitative financial models of accountants, bankers, and economists.

What this means is that if we are to intelligently manage our business affairs with full consciousness of what we are doing, we need to do so primarily through the modelling methods of information systems architects rather than financial modelling methods. By thus putting first things first, in an entirely logical manner, we would thus be able to cocreate the life-enhancing, moneyless Sharing Economy, giving everyone on Earth the opportunity to realize their fullest potential as spiritual human beings.

But whether such an intelligent way of managing our business affairs will ever be possible looks most unlikely. The slogan of the Olympic Games in London in 2012 was 'Inspire a generation,' to engage in sports, competing with each other. While it is admirable to encourage people to stretch out to fulfil their physical potential, what is really needed at the present time is a work ethic that would inspire people to stretch out to their psychospiritual potential, way beyond the comfort zones most live in today.

John Petersen described what is far more likely to happen in an interview in the *What Is Enlightenment?* magazine in July-September 2007, with the title 'The End of the World As We Know It?':

> As far back as 1986, I figured out that there was a whole string of potential events that were converging and could result in major disruption within twenty-five years. Around the same time, I discovered the work of Chet Snow and Helen Wambach who together wrote a book, *Mass Dreams of the Future*, based on their work doing remote viewing exercises [clairvoyance under hypnosis]. They asked twenty-five hundred people to envision the United States in the year 2030. About eighty-five percent of them reported the same thing: It's a place with no government, divided politically into four quadrants, and everyone is living in small communities, some of which are defensive and full of guns and others where people cooperate and work together.[183]

Well, contrary to John's belief, I am someone who has already lived through what is about to befall humanity as a whole. I began my studies into the root causes of our rapidly changing world in 1980, at the birth of the Information Society, which has since evolved through the Knowledge Society and what Winston Franklin and Angeles Arrien at the Institute of Noetic Sciences call the Wisdom Society,[184] into the Mystical Society, where I am living today.

So let me tell you a little more about how this book came into being. Essentially, IRL has become manifest in consciousness because I went through a cataclysmic death and rebirth process between January 1977 and October 1983, with its most intense period being between 27th April and 21st June 1980. At the time, I wrote that these eight weeks felt as if a dam had burst in my psyche, releasing thirty years of pent-up energy that had previously been blocked.

For I had long felt that I had been born into a society at war with itself, into an alien, dysfunctional family and culture that I did not belong to. Most significantly, I was taught from an early age that God, the Supreme Being, is resident in heaven, somewhere in outer space in the physical universe, supposedly ultimate reality. But how could this be? When we interpret the data patterns of experience as information and knowledge, we need a context in which to

do so. But, in the Christian concept of God and the physicists' concept of universe, religion and science have incompatible overall contexts. So, how could I possibly learn anything in such a confused, conflict-ridden environment?

So to make sense of the world I live in, I asked four other questions, in addition to the three I asked in 1980, listed on page xxxvi, the first three in 1950, when I was eight years of age, and the other when I was sixteen. It was then that I abandoned physics as the primary science, because I did not believe that the Universe has a beginning in finite time with a so-called big bang and in the philosophy of atomism, that an indivisible fundamental particle exists as the basic building block of all matter in the Universe. These are the questions:

1. What is the relationship between God and the Universe? Both these words indicate wholeness in some sense, but it is by no means clear how they relate to each other.
2. When nations go to war with each other, why do they each believe that God is on their side and against the other?
3. Why are there so many religious denominations and why do they talk so much about love and peace, yet spend so much time fighting each other?
4. What can we know about the Universe that is beyond the frontiers of science at any one time?

Today, to answer these questions, I use two other metaphors to describe what happened to me in the spring of 1980. First, this apocalyptic awakening happened because a supervolcano erupted or earthquake shifted in the depths of the Ocean of Consciousness, creating a tsunami in which everything was destroyed, as in Aceh province in Sumatra in December 2004. I thereby lost my family, home, job, career, and all means of livelihood.

But more significantly, it was as if a big bang exploded in my psyche, leading me to create a brand-new Universe, or rather a map of the Universe, for our mental models create our reality and govern our behaviour. There is no objective reality outside of us. Even matter, which is mainly space, is just a concept.

I can thus see why I learned very little at school and university, where I majored in mathematics, failing most of my examinations and only passing those that I did with minimum grades. So when I came to prove that human beings are not machines by performing a thought experiment by mimicking a computer, I had very little to unlearn. Virtually everything I have learnt in life, I have learnt since I was thirty-eight. In contrast, those with successful academic careers have very great difficulty in repeating this experiment in learning by starting afresh at the very beginning. For no one in their right minds would deliberately—as an act of conscious will—embark on such a perilous adventure, first destroying everything that most regard as very precious: our livelihood and relationships with family and friends.

So another major impediment for anyone seeking to repeat the thought experiment described in this book is that there is no social environment anywhere in the world that is con-

ducive for its development. Indeed, the opposite is the case, with both mainstream currents in today's postmodern society and the many alternative streams being opposed to the very idea of a grand narrative that can explain all human experience, from the mystical to the mundane.

Nevertheless, I'm very well aware that the big-bang energy that initiated the thought experiment described in this book is still within me, flowing freely without any cultural inhibitions. However, for the most part, I keep it hidden from even my closest friends, for if I were to release all this energy before they were ready to take it in, this could well lead them into what Christina and Stansilav Grof call a spiritual emergency, as spirit emerges faster than the body/mind/spirit organism can handle.[185] So for much of the past three decades, when in the company of others, I've had to hold back this Divine, Cosmic energy within me, which has put a severe strain on my health and well-being. Even though I've been on many spiritual retreats to find the Stillness at the Source of all this energy, it is as if I am pressing the accelerator pedal in my car without the engine being in gear. So I wonder what could happen if a social environment could be created where we could release the immense energy that lies trapped within us all. The potential is utterly mind-shattering, quite indescribable, even though I can feel it with every fibre of my being, often bringing tears of joy to my eyes.

Structure of book

Although many leading evolutionary scientists, philosophers, and spiritual teachers have implicitly stated that Integral Relational Logic is impossible, and hence that the life experience that has made it manifest is invalid, if I listened to their negative opinions, I would never complete this book as a highly polished product. Nevertheless, it is easy to see why they make such inhibiting assertions for the three volumes of the *Wholeness* trilogy are truly revolutionary, not easy to assimilate into minds that have been conditioned by the cultures and subcultures we live in.

One central issue here is that you and I are both Wholeness and as unique bodies, minds, and souls, unique expressions of Wholeness. So this book is not an attempt to *communicate* insights from me to you, for, in Reality, there is no separation between us. Rather, this book is just an *expression* of Wholeness, as a channel for the Divine, just as we all are. If Wholeness has a physical origin in the body, in my experience it feels as if it is in the solar plexus region, not in the heart or brain. No doubt this is where the rather crude expression 'have a gut feeling for something' comes from. So this book cannot be fully understood with mystical awareness or the academic intellect. As a biophysical being, I am endeavouring to write this book from what feels like the centre of Consciousness in my body, although I am aware that some passages written at various times during the past thirty years may be expressions of the pain that

I have felt as I passed through many dark nights of the soul. If you empathize with this subtle distinction, do please let me know.

Regarding the positioning of this book in the history of ideas, because Part I, titled *Integral Relational Logic: Liberating Intelligence from Its Mechanistic Conditioning*, embodies the Principle of Unity, the fundamental design principle of the Universe, it introduces the most radical change in Western thought since Plato, Aristotle, and Euclid laid down its foundations some 2,350 years ago.

Having shown that Wholeness or Absolute Consciousness is Ultimate Reality, Part II, titled *The Unified Relationships Theory: Healing the Fragmented Mind in Cosmic Consciousness*, is the most revolutionary book in science since Newton completed the Copernican/Keplerian/Galilean revolution in 1687. For the URT explains what is causing computer scientists to drive the pace of evolutionary change at unprecedented exponential rates of acceleration, an explanation that is not possible within the context and framework of materialistic, mechanistic science.

Hence, the Unified Relationships Theory is the grand unified theory of everything (GUT or TOE), defined by Brian Greene as "a theory capable of describing nature's forces within a single, all-encompassing, coherent framework".[186] Einstein spent the last thirty years of his life trying to solve what he hypothesized as the unified field theory. As a BBC drama documentary called 'Einstein's Unfinished Symphony' broadcast in 2005 told us, he sought a simple equation in which to express his model, like the famous equations $F = ma$ and $E = mc^2$.[187] But he never found that this expression for Wholeness is the equation that he was seeking: $A = A \cup {\sim}A$.

Einstein also did not succeed because, believing that God does not play dice, he focused attention only on gravitational and electromagnetic fields, eschewing strong and weak nucleic forces. However, physicists have not succeeded in solving this broader problem because they ignore the nonphysical mental energies that are causing scientists and technologists to drive the pace of evolutionary development at exponential rates of acceleration. They also omit the Divine Power of Life and the life-giving psychic, spiritual, and subtle energies that have the power to heal, as described by Marilyn Schlitz and Tina Amorok in *Consciousness and Healing*, the subject of *The Living Matrix* DVD. For as Einstein famously said, you cannot solve a problem with the mindset that created it.

Part III, titled *Our Evolutionary Story: Awakening to Humanity's Ultimate Destiny*, puts more flesh on the holistic theory of evolution outlined in Part II, thus completing the most revolutionary change in the theory of evolution since Darwin laid down its foundations in 1859 with *The Origin of Species*. For evolution is carrying humanity to its glorious culmination, at its Omega Point, at the end of time. Today, as many visionaries have prophesied, we

are entering the eschatological epoch of humanity's sojourn on Earth, the implications of which are the central issue of our times.

The book as a whole, titled *Wholeness: The Union of All Opposites*, is alternatively titled *Semantic Principles of Natural Philosophy* to indicate that it completes the revolution in science that has been unfolding for the past few decades, just as Newton's *Mathematical Principles of Natural Philosophy* ended the 144 years during which the first scientific revolution emerged.

Nevertheless, *Wholeness* can be seen as a natural evolutionary process, completing a series of cosmologies that have unified more and more opposites over the years. Kepler introduced the first term in this series by unifying mathematical astronomy and causal physics in 1609. Newton then unified Kepler's celestial physics and Galileo's terrestrial dynamics in 1687,

In 1905, Einstein developed the special theory of relativity by reconciling the incompatibilities between the principle of relativity, which states that physical phenomena run their course relative to different coordinate systems according to the same general laws, and the observed constancy of the speed of light.[188] Einstein did this by replacing Newton's absolute framework of space with a relativistic space-time continuum, in which the notion of simultaneity is relativistic. In the general theory of relativity, published in 1916, Einstein went on to show the equivalence of gravitational and inertial mass during acceleration,[189] and in so doing abandoned the Euclidean–Cartesian rectilinear model of space, replacing it with the view that space-time is curved.

In 1980, David Bohm continued this unifying process by showing how we can reconcile the incompatibilities between quantum physics and relativity theory in *Wholeness and the Implicate Order*. For the theories of relativity and quantum mechanics, which Bohm said should really be called 'quantum *non*-mechanics',[190] display opposite characteristics, the former having the properties of continuity, causality, and locality, with the latter being characterized by noncontinuity, noncausality, and nonlocality.[191] The central notion in this book is the holomovement, an undivided flowing movement that Bohm likened to a river, beneath the surface of the material universe, accessible to our five physical senses,.

Wholeness is the final term in this short series, unifying not just *some* opposites, but *all* of them. As such, it is able to provide satisfactory answers to most, if not all, the questions that materialistic, mechanistic science is unable to answer, some of which are listed in *What Remains to Be Discovered*, by John Maddox, long the chief editor of *Nature*, and *What We Still Don't Know*, a television series introduced by Martin Rees in 2004, due to be published as a book in February 2013, according to Amazon.

One central issue that he raises is that while general relativity and quantum theory, the two principal paradigms in physics that emerged in the twentieth century, tell us much about the physical universe, we still lack a deep understanding of what we know. Essentially, this is because of the incompatibilities between these paradigms, which Bohm resolved with his theory

of the implicate order, still not recognized by most physicists because they are unwilling to dive beneath the surface of things. Similarly, it has been said that we know a great deal about the brain, but we do not understand what we know. And even though the human genome has been sequenced, Steve Jones, Professor of Genetics at University College London, has said, "We don't understand genetics at all."[192]

To set this exposition into its business context, the Preface to Part I describes a business management and modelling problem that no one on Earth seems to know exists. Essentially, when designing business systems, information systems architects develop integrated models of the relationships between the basic entity types in an enterprise, such as customers, products, and deliveries, and between the processes that deal with these entities, such as manufacturing, ordering, and invoicing. However, what they omit is the modelling process itself, for to include it they must look inwards at the way that they think and organize their ideas.

It is by solving this problem that all outstanding questions of science can be answered. For as Maddox said, "The big surprises will be the answers to questions that we are not yet smart enough to ask."[193] So by solving the business management and modelling problem outlined in the Preface to Part I, we can also answer the Big Questions of human existence that have fascinated and baffled humanity for millennia, such as "Who are we?" "Where have we come from?" and "Where are we going?" It is vital that we learn to solve this problem, for if we cannot do so, evolution cannot become fully conscious of itself within us human beings and we cannot intelligently manage our business affairs with full consciousness of the creative evolutionary energies that cause us to behave as we do.

And for this to happen, we need to start afresh at the very beginning, the title of Chapter 1, by far the most difficult chapter to write and probably to read because there is no past and therefore language on which it can be based. Nevertheless, if we focus attention on just a few primal, bootstrap concepts, it is quite possible to get liftoff, far exceeding the escape velocity needed to fly far beyond the gravitational pull of Western civilization and all other cultures and subcultures on Earth at the present time.

Having shown how we can clear the ground of stones and thistles, which inhibit the mighty oak that represents Wholeness from emerging, Chapter 2, 'Building Relationships' on page 177 describes the coordinating framework of Integral Relational Logic, showing that the underlying structure of the Universe is an infinitely dimensional network of hierarchical relationships.

However, what this chapter omits are the many different relationships between opposites, which have so troubled humanity for the past 25,000 years and more. So Chapter 3, 'Unifying Opposites' on page 223 shows how we can reconcile all these dualities, at least in the relativistic world of form. The key concepts here are the Principle of Duality, and the Circle, Tri-

angle, and Cross of Duality, which exist in the ontological level of the foundations of IRL, universally applicable, prior to interpretation by a knowing being.

Chapter 4, 'Transcending the Categories' on page 243 then completes the picture, by showing how we can apply the Principle of Duality to form the concept of the Absolute in exactly the same way as we form concepts in the relativistic world of form. In this simple way, we can end the long-running war between science and religion and so realize our True Identity as Divine, Cosmic beings, living in Love and Peace in the Eternal Now.

The structure of Volumes Two and Three of the *Wholeness* trilogy will be introduced later.

Finding a language

Although I have said that it is impossible to communicate Ineffable, Nondual Wholeness, the ultimate goal of evolution on this planet, I nevertheless need a language in which I can express Wholeness, describing how IRL and the URT have arisen in consciousness. This is not easy to do because IRL is not based on the past and the words we use to communicate with each other are heavily loaded with the emotional past and future.

Even though everyone in every culture and discipline uses IRL everyday to express their experiences in words and other symbols, generally we are not aware of the impersonal, ontological framework that we implicitly use or of the overarching context that we all share. Because historically our learning has been influenced by our cultural conditioning, in particular, we all have our own ways of interpreting our experiences, using a wide range of different languages.

Furthermore, the Cosmic Context we all share is Ineffable; it is quite impossible to describe it in words. To try to do so is as absurd as trying to describe a beautiful sunset to someone over the telephone. How then can we put into words that which cannot be named? Well, we can follow the lead of Shakyamuni Buddha and use words as "a raft used to cross to the other shore or a finger pointing to the moon".[194] In this way, we can endeavour to speak about what Lao Tzu called the Tao: "Tao can be talked about, but not the Eternal Tao. Names can be named, but not the Eternal Name.[195]

So as Integral Relational Logic does not belong to any culture in the world, I cannot really describe it any language that reflects any particular culture. I really need a transcultural, transdisciplinary language. But such a language does not exist; there is no world-wide Esperanto. So short of creating a completely new language, unrelated to the past, I borrow words from the various cultures in the world. As I was born in England, I primarily borrow words from the English language.

However, English reflects a dualistic, materialistic, and mechanistic worldview in which we are all seen as being separate from God, from Nature, and from each other. So it is not really possible to describe what is essentially an Eastern worldview in English, or any other

European language for that matter, without making significant changes to the meanings of many key words.

David Bohm was very well aware of this problem when developing his theory of the implicate order. He was particularly concerned with the subject-verb-object structure of English and other languages.[196] In these languages, a separate entity, acting as an agent, appears to do things or act on other entities. Such a linguistic structure cannot easily represent a process view of the Universe, proposed by Heraclitus when he said all is flow,[197] and resurrected in modern times by A. N. Whitehead.[198]

For Bohm was seeking to present a worldview in which undivided flowing movement is primary. To deal with this problem, he created the rheomode of language, from a Greek word *reos* 'stream' or 'current'.[199] This experiment in language structure has not caught on, because it really is too radical. Even though many Native American languages have no nouns, as *The Language of Spirituality* DVD describes, it is not easy to use words in the rheomode within the overall structure of English.

However, another approach to language that David Bohm used is much more revealing. When we look at the root meanings of words we often find meanings that more accurately describe the world we live in than modern meanings. Bohm called this approach the 'archaeology of language.[200] It seems that our ancestors were in deeper contact with themselves and Nature than we are today.

To see how the West's view of the world has become separated from Reality over the years, we can do no better than turn to the word *physics*, which derives from Aristotle's treatise *Physics*, a translation of Greek *ta phusika*, literally 'natural things', the neuter plural of *phusikos* 'of nature', from *phusis* 'birth, origin; nature, inborn quality' and *phuein* 'produce, bring forth; grow, be born', from PIE-base **bheuə-* 'to be, exist, grow', also root of *be*. In turn *nature* derives from Latin *nātūra* 'birth', from *nātus*, past participle of *nāscī* 'to be born', from PIE base **genə-* 'to give birth, beget', also root of Greek *genesis* 'origin, birth', from which *genetics* and many similar words are derived. This PIE base is also the root of *kind*, through Old English *gecynde* 'natural'. So it is innate for us to be kind, especially to our own kin and those with the same nationality, also from Latin *nātus*.

We can see from this etymology that while the ancients were in touch with the Divine Source of the physical universe, since Aristotle the superficial belief that the physical universe is the primary reality has lain very deep in the Western psyche.[201] But when we look deeply into ourselves, we discover that everything in the manifest world of form is born of Life, arising directly from the Absolute. What we observe with our physical senses is just the surface of things, the waves and ripples on the vast ocean of Consciousness.

But changing the meaning of words in isolation is not really sufficient to describe a coherent view of the Totality of Existence. To do this, we need a consistent set of words that cover

the entire range of human experience. This means that when we change the meaning of a word, we need to change the meanings of other words so that all possibilities are covered.

This is not something that we normally do consciously in everyday life. To give an example of what I mean here, we can look at bidding systems in bridge. Bidding in bridge uses a language consisting of just twenty-three words (e.g. *double*), which can be combined into thirty-eight phrases (e.g. *three no trumps*), not all of which are valid at any one point in the bidding. It is the task of these few terms to convey the values of many billions of possible hands.

In a natural bidding system, like Acol or Goren, an opening bid of one club indicates that the bidder has a reasonably strong holding of clubs, a potential trump suit. The responder can use this information when it is her or his turn to bid, for instance, by bidding one diamond to indicate a possible alternative trump suit.[202]

But in a conventional bidding system like precision club, an opening bid of one club has a quite different meaning. It means a strong hand, with a potential for game or even a slam. This means that the meanings of several other possible opening bids need to be changed, together with possible responses by the partner. So in the precision system, a response of one diamond has a quite different meaning from its meaning in Acol. Changing the meaning of one bid has implications on many other bids.[203]

So how are we to change the meanings of words to match the world we live in as accurately as possible? Well, the linguistic situation we face is similar to that faced by information systems architects designing integrated information systems in business. For it is not uncommon for different departments to have quite different views of what appear to be the same words and concepts.

For example, finance, marketing, and distribution departments may well have different views of the meaning of the concept of customer. Similarly, a salesperson and a production manager may have quite a different perspective on what a backlog is. A salesperson usually regards a backlog as an order that has not yet been delivered to a customer, while for a production manager, a backlog is work that is behind schedule.

These differences in the meaning of *backlog* are also reflected in the way that the Americans and British use this word. They use the word rather like the salesperson and production manager, respectively.[204] And if a theatre production on Broadway bombs, this means that it was a flop. On the other hand, if a play in London's West End goes like a bomb, it is a great success. It is little wonder that George Bernard Shaw is attributed with saying, "England and America are two countries divided by a common language."[205]

The issue of language is even more challenging when we come to integrate all knowledge into a coherent whole. For then we find that the many cultural and disciplinary conceptual maps in the world do not fit together at all. It is rather like taking maps of the different local-

ities on Earth and trying to fit them together on the assumption that the Earth is flat. It simply does not work.

While changing the meanings of words is necessary to integrate all knowledge into a coherent whole, this, in itself, is not sufficient. I have needed to coin three new words to describe IRL and the URT. As already mentioned, two of these are *panosophy* and *collumination*, defined on pages xlv and lii.

The third word is *paragonian*, which I coined on 29th October 1984, as the title of a foundation or institute that could lead us into the peaceful and harmonious society that could emerge following the collapse of the global economy at the beginning of the 2010s. *Paragonian* derives from Greek *para* 'beyond' and *agon* 'contest' or 'conflict', a word that is also the root of *agony*, until the 17th century meaning 'mental stress', *antagonist*, 'a person who one struggles against', and *protagonist*, 'leading person in a contest'. Any similarity with *paragon* is coincidental for this word has the Greek root *para* 'alongside' and *akonan* 'sharpen', together figuratively meaning 'compare'. Rather, *paragonian* literally means 'beyond conflict and suffering', which we can realize when we learn to unify all opposites in Wholeness, grounded in Oneness. *Paragonian* thus encapsulates the Principle of Unity, denoting the essence of *Advaita* ('not-two') in a word with a Western etymology.

At the end of this first volume of the *Wholeness* trilogy, I provide a glossary of many terms that I have needed to define or redefine in order to communicate a coherent body of knowledge that is based squarely on the seven pillars of wisdom, rather than the seven pillars of unwisdom, on which Western civilization is based. As the meanings of so many words need to be changed, this is still very much work in progress. And how could this glossary be translated into other languages using different writing scripts? Even German cannot distinguish between the esoteric and exoteric meanings of words, for all substantives are capitalized in German. But no doubt this will sort itself out if it is meant to happen.