

The Alchemy of World and Soul

Essays, Contemplations, and Meditations
on Spiritual and Global Transformation
in the 21st Century

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Introduction: The Chrysalis Age

In its transformation from an earth-bound leaf eater to a gossamer-winged swallowtail, the caterpillar must first go through a transitional, or chrysalis, stage. From the outside, it would appear that this small creature, wrapped in its cocoon, is merely hibernating. In truth, this shape-shifting insect is undergoing an enormous transformation on both a structural and cellular level. When it emerges from its protective envelope it will have changed from a multi-legged larva into a multicolored butterfly, seemingly as light as the air it floats upon.

Our world is currently entering into its own chrysalis stage of transformation. Humanity is slowly shedding the tight-fitting skin of modernity and the vestigial trappings of the traditional world that preceded it for a more integral and complete way of seeing and being in the universe. As with the metamorphosis within the caterpillar's cocoon, we can expect this transformation to be radical, extensive, and violent. It will be a simultaneous transformation of ourselves and our world that will extend over much of the coming century, if not beyond it.

The notion that the human species is experiencing a significant period of change, affecting not only its various cultures and societies but also the very world we inhabit, is not new. Many writers have compared this change to the one that swept through Western Europe in the 15th century. Although the comparison between the Renaissance and the world we are rapidly creating is illuminating, it is not entirely accurate. The Renaissance, as the word itself indicates, was a rebirth. We are not rebirthing some world we have seen before. We are producing something entirely different, but yet not separate, from the world of our past. The world we are constructing is a result of the world we have made over the last century, and which we continue, largely blindly, to fashion each day. Our world has always been integral, but we are adding layers of connections and levels of complexity to it at an unprecedented rate.

We are immersed in the initial phases of a new age — a Chrysalis Age — a period of transformation that, by the end of the 21st century, will leave much of our world unrecognizable. Our success as a species in coping with this incredible transformation will depend largely upon our ability to distinguish how our *worldview*, our way of understanding the universe, informs and directs the course of human affairs. By understanding how we can transform our worldviews from the shallow ways of seeing, which are indicative of the traditional and modern perspectives to the deeper ways of knowing that are available to each of us, we will be able to transform the world in a consciously creative manner. Although we are in a Chrysalis Age, there is no guarantee we will manage a successful metamorphosis into a global civilization resembling the metaphoric butterfly. Unlike the caterpillar, we cannot afford to rely upon nature's hand to guide us toward a more beautiful form. Without conscious guidance, personally and collectively, we are just as likely to emerge from the chrysalis a deformed, maggot-like creature as a brilliantly tinted monarch.¹

Alchemy, the metallurgical and metaphysical art of transmutation that found its birth in the Middle Ages and its flowering in the Renaissance, was also about transformation. The physical goal of alchemy was to transform base metals, such as lead, into gold via the creation of the mythical Philosopher's Stone. As psychologist Carl Jung was first to point out, alchemy was a study of, and metaphor for, transformation of the self. In their obscure and arcane texts, alchemists explored the deeper meanings of separation and union throughout the universe, from the dichotomy of the male and female to the unity of Nature and the Divine. But, as the scientific

paradigm came to dominate our worldview, the metaphysical investigation at the heart of alchemy was lost. As Jung explained, “With the decline of alchemy the symbolical unity of spirit and matter fell apart, with the result that modern man finds himself uprooted and alienated in a de-souled world.”²

The short essays, contemplations, and meditations that comprise this book are an attempt to rectify that “de-souling” of the world in some small way. The book is divided into several sections, each exploring information and ideas relevant to spiritual and global transformation. The first section, *Spirituality and Globalization*, examines the relationship between these two modes of transformation and their impacts on our future. In the second section, *Understanding Our World*, the various aspects of our world are briefly surveyed — from the physical and natural spheres, to the human spheres of cultural conflict and global economics, to the rapidly advancing technologies of genetic engineering, computers, robotics, and nanotechnology. Each of these short essays is followed by a guided contemplation that attempts to actively deepen the reader’s perspective in regards to the particular topic.

The third section of the book focuses on *Inner Knowledge* — defining and exploring in more detail spirituality and personal transformation. The fourth section of the book complements the third, providing a series of *Interspiritual Prayers and Meditations* to illuminate one’s individual, spiritual path. The final section of the book is an *Interspiritual Sadhana*, a personal program of transformative meditations that can be used as the basis for a daily non-denominational spiritual program. Lastly, the book contains nine appendices of information too detailed for inclusion in the main text, but which some readers may find edifying.

This book is an effort to provide a new sort of alchemy for our burgeoning Chrysalis Age. Like those ancient alchemical texts, it attempts to provide a means of transforming the world and the self by exploring the illusion of separation between person, cosmos, and the Divine. By providing an Integral path toward the transformation of self and world, hopefully a more complete understanding of both will arise.

Spirituality and Globalization

Who Needs Spirituality?

When I was a young boy growing up in rural Michigan, it was my responsibility to take the dogs out for their nightly walks. More often than not, the dogs ran off down the dirt road we lived on in search of some faint olfactory treasure that I had no hope of sensing. The road went on for a mile or more of wooded darkness, our house being the last small signpost of civilization.

I would run through the pitch-black night, hoping not to trip and fall, knowing that the dogs could hear me as well as see me, though I could gain no apprehension of them until stumbling upon them in a rush. Finally, bending their desires to my will, we'd walk back toward the house. As we walked, I would stare up through the branches of the trees at the glowing mass of stars that blanket the country night, awed by these silent children of creation — sparkling miniature suns swimming in ebony.

An avid fan of science fiction and Carl Sagan's *Cosmos*, I knew there were "billions and billions" of stars in our galaxy and billions of galaxies filling an unimaginably un-fillable universe. I knew I could not fathom the expansiveness and depth of the cosmos, but walking beneath the mantle of distant suns, the dogs licking my hands, I would stare up into the face of infinity and try, nonetheless.

A feeling would wash over me, slight and nearly imperceptible. A feeling I did not label at the time but later came to think of as spiritual. It was not a profound, mystic experience of union with the universe, simply a deep sense of connection with everything. A feeling that, while I was an infinitesimally small part of the cosmos, I was an important part ... because I was aware that I was part of it. By the time I reached the front steps of the house, the notion had faded, but the sense of it continued to cling to me as I aged.

Nearly everyone has had an experience they would describe as spiritual — similar to those I encountered walking the dogs on star-filled nights. Like most people, for many years, I thought of myself as *spiritual* without ever really knowing what I meant by the word. It was only many years later, when I began reading the sacred texts of the world's wisdom traditions and the writings of modern, transpersonal psychologists that I began to have an inkling of what I meant by *spirituality*. This inkling only grew into an understanding when I began a regular practice of meditation.

Around the turn of the millennium, I had the extremely good fortune of being able to take a year-and-a-half sabbatical to research and write an earlier draft of this book, exploring the connections between spirituality and globalization. Globalization is a single word that describes the world we are creating — a world of accelerating technology, environmental degradation, cultural conflict, free-flowing capital, reduced trade barriers, and shifting global power. It is a word implying transformation of our physical, social, and cultural spheres.

While *globalization* is the transformation of the world culturally, economically, technologically, and environmentally, *spirituality* is the transformation of the individual. Spirituality can be thought of as having two interrelated aspects — the *interpersonal* and the *mystical*. Through the practices of *interpersonal spirituality*, such as prayer, contemplation, and meditation, we learn to cultivate greater compassion and universal love. We become more patient, less judgmental, more tolerant, more forgiving, and more grateful. As psychologist Roger Walsh explains in his book, *Essential Spirituality*, "The ultimate aim of spiritual practices is awakening; that is, to know our True Self and our relationship to the sacred. However, spiritual practices also offer numerous other gifts along the way ... Gradually, the heart begins to open, fear and anger melt, greed and jealousy dwindle, happiness and joy grow, love flowers, peace replaces agitation,

concern for others blossoms, wisdom matures, and both psychological and physical health improve.”³

Mystic spirituality is about transforming the way we perceive the world, shifting our view from one based solely on the self and our sense of separation to one that sees the inherent interrelatedness of all things. Mystic spirituality is a personal realization in that we experience it individually, but it transcends the individual person by opening us up to the beauty, wonder, and importance of all persons and of the whole of the universe. As theologian Paul Tillich pointed out in *The Courage to Be*, mysticism “plunges directly into the ground of being and meaning, and leaves the concrete, the world of finite values and meanings, behind.”⁴

Mystic spirituality does not forget this concrete world, but transcends it. It implies a direct realization of the numinous or the Divine, the apprehension, on some level, of Spirit as the Ground of All Being. It denotes a shift of our normal way of “seeing” the world and a transcendence of our separate sense of ego-self for a wider grasp of reality. It is an experience, on one level or another, of reality as Spirit, or the Divine — an inseparable wholeness, manifesting as the entire cosmos, moment by moment, in a timeless now. It is an aspirational experience that engenders greater compassion, equanimity, patience, and inner peace — reinforcing the connection with interpersonal spirituality.

In Michael Lerner’s book, *Spirit Matters*, he writes “Spirit or God or Highest Reality is the phenomenon that allows us to transcend the human tendency to act out on others the pain that has been acted upon us and thus to break the ‘repetition compulsion.’ To speak of that capacity to transcend and break the repetition compulsion and become embodiments of generosity and love and goodness is to talk about Spirit. Our meaning in life comes from being embodiments of that Spirit, elements of the transcendent consciousness of the universe as it moves to actualize goodness and beauty.”⁵

Spirituality is not based in craving to escape the world, but in a desire to see and be in the world more fully. Moreover, spirituality is available to all of us, regardless of social or cultural background. This transformative way of perceiving and being in the world is what we desperately need to help counter the narcissistic, close-minded, and materialistic worldviews that dominate the sphere of human affairs today. It is this vision, this deeper way of perceiving reality, which will help us guide the global transformations we are engaged in. Just as globalization transforms the physical structures of the world, spirituality can transform the deeper structures of the self.

When we transform ourselves individually, we inevitably transform the world we collectively live in. Likewise, when we transform the world, whether socially, culturally, economically, technologically, or environmentally, these changes naturally affect the individual. The feedback loop between social transformation, or globalization, and personal transformation, or spirituality, is powerful, but rarely recognized in mainstream circles where the emphasis falls almost entirely upon globalization. Spirituality is mentioned only in passing, if ever.

Currently, we are changing the world at a pace never before seen in our human history. Not surprisingly, this is placing a great deal of pressure on individuals in all societies. The danger, in part, is that these forces of social and cultural change are so swift that we will not have the time to fully internalize and adapt to them in a healthy manner. The world is being transformed faster and faster while, in many cases, our personal transformations are sluggish or frozen in place. Our understanding of the changes taking place in the world depends on the potential for change to take place within each of us.

The time when we could hope to understand the world simply by watching the evening news is long, long past, if it ever existed. What has really changed about the world is not so much that

we can't understand it with minimal effort, because we never could, but that now a minimal understanding of the world is actively dangerous. If we do not understand the economics of globalization, how can we hope to have a say in its implementation? If we do not understand the social, cultural, and political causes of terrorism, how can we hope to defend ourselves from it? If we don't understand the science behind genetic engineering, how can we hope to understand the ethical considerations of stem cell research or genetically modifying plants, animals, and humans?

If there was ever a time when we could blindly lead our lives while oblivious to the world at large and simply hope that everything would work out for the best, it is long gone. If we are to have any hope of a future that provides a safe and sustainable world for our great-grandchildren, then we must actively engage the world we live in now.

Most importantly, we cannot engage in either social or personal transformation separately. We must pursue them hand-in-hand. Spirituality alone might be able to create a better world by slowly transforming each human to create a more divine civilization, but such a path is likely to take millennia. Likewise, the transformation of the world socially, culturally, environmentally, and otherwise, by the forces of globalization, will never create a more *just* world, much less one that reflects the divinity of the universe, or the superior natures of the human heart, without the direction of a worldview that is intimately acquainted with the Divine.

What is Globalization?

Globalization is "...the inexorable integration of markets, nation-states and technologies to a degree never witnessed before — in a way that is enabling individuals, corporations and nation-states to reach around the world farther, faster, deeper and cheaper than ever before, and in a way that is enabling the world to reach into individuals, corporations, and nation-states farther, faster, cheaper than ever before."

Thomas L. Friedman, *The Lexus and the Olive Tree*, p. 9

Globalization is a catchall word describing the transformative effects of various aspects of the world becoming more interconnected. It is often used to refer to the way liquidity of capital and the erasure of trade barriers has changed the nature of the world economy. It also refers to how these economic changes are driven by advances in technologies such as computers, the Internet, and manufacturing. It can be used to describe the cultural effects of worldwide mass media that is dominated by a handful of corporations, or used in talking about the shifts and changes in governments and social structures caused by changes in the world economy and technology.

"Accordingly," as David Held and Anthony McGrew write, "globalization can be thought of as; a process (or set of processes) which embodies a transformation in the spatial organization of social relations and transactions — assessed in terms of their extensity, intensity, velocity and impact — generating transcontinental or interregional flows and networks of activity, interaction, and the exercises of power."⁶ Although there are a large number of individual aspects to globalization, it implies many levels of connection. We are living in Marshall McLuhan's Global Village, and, like any village, we are getting to know each other better while simultaneously affecting each other's lives more deeply.

This isn't the first time we've gone through a phase of globalization. Historians point to the period of 1870 to 1914, which comprised the economic and industrial flowering of the Belle Époque in France and Belgium, the Victorian Period in England, and the Gilded Age in the United States. Cautionary critics point out that this earlier phase of globalization eventually led us into the First World War. While the similarities between today and the turn of the 19th century are significant, they can also be misleading. Much like today, there were striking advances in technology, such as the telephone, the automobile, and motion pictures, not to mention developments in automation and the creation of the modern assembly line. Also, like today, there was a vast increase in trade between nations and a proliferation of large corporations with extraordinary amounts of capital and power.

However, these similarities are only surface deep. The pace of technological change at the turn of the 19th century was rapid, but it was crawling at a snail's pace in comparison to the rate of technological change we are currently experiencing. Moreover, the technologies we are creating today dwarf the power of anything we have previously envisioned and implemented.

In 1914, international companies still retained a degree of loyalty to their home nation. By contrast, today's corporations are not simply powerful leviathans, they are, with ever fewer exceptions, truly transnational and far more concerned with their market values than with the interests of any particular nation. Moreover, the globalization of the Belle Époque can no more be credited with provoking the First World War than the isolationism of the 1920s and 1930s can be blamed in its entirety for resulting in the Second World War. Both were contributing, but not decisive, factors in helping to formulate an atmosphere conducive to conflict.

The situation today is extremely different. While war is ever more likely as globalization takes a firmer hold on the world, it is ever more unlikely to involve multiple Western nations, except when acting in concert against a common foe. The economic and political ties that bind mature democratic nations together make it far less advantageous for them to attempt to resolve their conflicts through force. On the other hand, the leaders of less-developed nations with little or no democracy, weak infrastructure, omnipresent corruption, and rampant poverty, often find violent conflict a way to distract impoverished populations from their tyranny, as well as a means to resolving differences.

The neo-liberal agenda that promotes the process of globalization we are currently following suggests that stronger economic ties reduce the likelihood of war. *New York Times* columnist Thomas Friedman refers to this as his Golden Arches Theory,⁷ by which no two nations that possess a McDonald's have gone to war. This theory hasn't held up entirely, as there are McDonalds in several countries that have been in conflict over the last two decades, from Serbia and Kosovo, to the Ukraine and Russia. However, by and large, it is an accurate platitude. He has even updated this to what he calls the Dell Theory, whereby countries that are part of a global supply chain are less likely to fight a war.⁸

The point is that integrated economic prosperity can lead to less conflict with neighboring nations. However, that economic prosperity needs to reach a rather significant level to establish real security. The neo-liberal agenda of globalization seeks to increase economic stability and prosperity through international free trade. This tends to have both positive and negative effects. Naturally, those who are pushing this agenda (and profiting most heavily from it) tend to focus on the benefits. Not surprisingly, those who are critical of it tend to focus only on the negative aspects of globalization. Though it has existed since the beginning of the 1990s as a loose coalition of environmental groups, corporate watchdog organizations, and media critics, the anti-globalization movement first reached broad popular awareness with the protests against the World Trade Organization in Seattle in the fall of 1999. This event created a great deal of popular attention for the subject of globalization, granting both its proponents and detractors a wider audience, but few citizens seem to have grasped the implications of the arguments as they have played out over the ensuing years.

The truth of globalization, as always, lies somewhere between the extremes of the claims and criticisms of the ideologues on both sides of the issue. Globalization does have enormous benefits, but these are often slanted in the direction of those who are already reaping enormous advantage from the present economic system. Free trade can be helpful to developing an economy, but only if it is fair and balanced, giving all sides and all participants equal rewards. For example, the flight of manufacturing companies to less-developed nations in search of cheap labor has effects that are both positive and negative. Developed nations get cheaper goods, but fewer good manufacturing jobs. Developing nations get jobs, but not the social and economic benefits these jobs once provided to their counterparts in developed nations.

There is a wide gap of meaning between freedom and free trade. As Anthony Giddens writes in *The Third Way and Its Critics*, "The citizen is not the same as the consumer, and freedom is not to be equated with the freedom to buy and sell in the marketplace."⁹ Globalization also has serious impacts on the environment, social structures, and cultures, but then so do economic and cultural isolationism. The Third Way, which Giddens is a strong advocate for, attempts to bridge this gap and push globalization in a slightly different direction by using various forms of regulation to cushion the effects of free market capitalism. While this is a rational compromise, it fails to address the root causes of the problems arising from globalization. Those who are promoting a Third Way

for the global economy are still gripped by a Modern worldview. Giddens is right about citizenship, though, and this will be nowhere more obvious than in China.

The Chinese government is attempting to convince its population that they really want to be consumers, not citizens. They have every reason to believe this will work because they can see how willing American citizens have been to forego participation in government and leave behind all notions of a civil society as long as they could have fast food, shopping malls, and 500 channels of satellite TV. As the statistics on psychological depression in America indicate, this life of consumption and separation isn't all it's cracked up to be.¹⁰ One has to wonder how long this situation will continue and whether countries like China will experience the same dissatisfaction with the consumer way of living as many Americans are beginning to feel.

To be specific, I am not against globalization in general, I am against the way we are proceeding to go about it, though by and large, it comes down to pretty much the same thing, as I disagree with our current path of "progress." However, I don't advocate a Third Way that cuts a poor compromise between two extremes, nor do I believe that some return to economic and cultural isolationism will solve any more problems than it creates. I believe we need to reconsider the way we envision the economy at the local, national, and global levels, taking into account the implications of technology, social structures, culture, and the environment at every level of our societies.

We need to begin viewing the global economy through the lenses of complexity and network theory. These schools of science look toward complex systems in nature, such as ecologies and networked systems like the Internet, to discern the fundamental rules governing highly interconnected structures, such as our local, national, and global economies. It is only by learning how our various, intermeshed, economic systems work that we can have any hope of consciously organizing them to benefit the whole of humanity. And to do this, we will not only need to understand how economies function on a financial level but also how politics, government, culture, the environment, and technology influence them. Failing to do this will likely lead to our failure in every other aspect of civilization. In the wake of the Great Recession of 2008, there are some who suggest that globalization may be on the wane — that the economic, political, and cultural connections between nations may be fraying as the result of the long standing effects of the global financial meltdown.¹¹ While this may be true to some extent in the short term, rather than slowing, it is more likely that the pace of globalization will increase as the world economy recovers and grows in the coming decades.

(For a brief explanation of complexity theory, see the section [Defining Complexity](#). For more in-depth information, see [Appendix VII](#).)

Globalization: Advantages and Disadvantages

What follows is a brief summary of the advantages and disadvantages of globalization:

Some Advantages of Globalization:

- Increased free trade between nations.
- Increased liquidity of capital allowing investors in developed nations to invest in developing nations.
- Corporations have greater flexibility to operate across borders.
- Global mass media ties the world together.
- Increased flow of communications allows vital information to be shared between individuals, nations, and corporations around the world.
- Greater ease and speed of transportation for goods and people.
- Reduction of cultural barriers increases the “global village” effect.
- Spread of democratic ideals to non-democratic nations.
- Greater interdependence between nation-states.
- Reduction of likelihood of war between developed nations.
- Increases in environmental protection in developed nations.

Some Disadvantages of Globalization:

- Increased flow of skilled and non-skilled jobs from developed nations to developing nations as corporations seek out the cheapest labor.
- Increased likelihood of economic disruptions in one nation affecting all nations.
- Corporate influence of nation-states far exceeds that of civil society organizations and average individuals.
- Threat that the control of world media by a handful of corporations will limit cultural expression.
- Greater chance of reaction to globalization being violent in an attempt to preserve cultural heritage.
- Greater risk of disease vectors being transported unintentionally between nations.
- Spread of a materialistic lifestyle and attitude that sees consumption as the path to personal fulfilment.
- Increased likelihood of international bodies like the International Monetary Fund and the World Trade Organization infringing on national and individual sovereignty.
- Increase in the chances of civil war within developing countries and open war between developing countries as they vie for scarce resources.
- Decreases in environmental integrity as polluting corporations take advantage of weak regulatory rules in developing countries.

Worldviews and the World

Our worldview is, quite literally, the way we view the world. It is the manner in which we interpret the events of our lives and the world around us. In philosophy this is known as an *epistemology*, the way we know what we know. All philosophies are an attempt to explain and define their author's worldview. Whether they utilize mythology, occult interpretation, philosophical rationalization, scientific empiricism, or direct interior observation, they are all attempts at explaining at least some small portion, if not the whole, of the universe.

Interestingly, not only do our philosophies describe the world, they change the world as well. Our understanding of the world determines how we behave in it, and our behavior inevitably alters the world. This eventually becomes a feedback loop, whereby the changes we make in the world evoke changes in our epistemology. Much of the epistemological crisis experienced by people from the Renaissance onward is due to the internal conflict this feedback loop generates. This is because, while it seems to be clear that we all move through various stages with ever-deeper worldviews, or frames of consciousness, we do not all move through them at the same pace, or in the same manner.

In his book, *Quantum Jump*, Canadian policy analyst W. R. Clement notes that the world, especially the Western world, is entering what he refers to as a second Renaissance. Clement explains that the first Renaissance was so strikingly different from the Middle Ages that preceded it because it manifested an entirely new epistemology. This new worldview then began to reinforce itself, spreading among a larger portion of the population until the feedback loop between internal and external change was unstoppable.

Clement points to several things driving this shift in viewpoint, from the development of perspective painting and the rise of humanistic philosophy to the spread of the use of clocks, which changed how we envisioned time. He also points out many of the developments he feels are driving the changes we see in the world around us today. These include Einstein's theory of relativity, quantum mechanics, computer and Internet technology, and shifts in global political and economic structures. Clement believes that our world is not only changing due to global shifts in perspective, but that some places are lagging behind in these shifts to the detriment of themselves and everyone else.

Moreover, he feels that a new epistemology is necessary to cope with the changes being wrought by the current worldview. However, as he points out, "New eras tend to be turbulent and messy. There is little that can be done to guide new eras because they have all the subtlety of a bull elephant surrounded by a herd of cow elephants in heat. But, it is argued, new eras can be understood in their own terms. Before we can understand a new era we have to acknowledge that one is happening ... and that is usually difficult to do. The reason for the difficulty is that new eras require new ways of perceiving the world."¹²

It is true that the shift between worldviews can be a frightening transition, especially when the world around us is going through enormous changes as well. Shifts in worldview, however, are only likely to occur when change is present, whether it is internal or external. In *New World New Mind*, psychologist Robert Ornstein and biologist Paul Ehrlich point out that our human brains have evolved over several hundred thousand years to cope with a particular environment, namely the natural world. The world that we have created in the last five thousand years of civilization is extremely different from what our brains have evolved to comprehend. Moreover, the world we

are creating in this new century widens the gap between our brain's natural levels of perception and our manufactured environment to an extraordinary distance.

Cumulatively, this makes it difficult for us to properly determine threats within that environment. Contrasting the difference in perceived levels of threat between auto accidents and terrorist attacks, Ornstein and Ehrlich write, "Every month, hundreds of Americans are severely injured or killed because of underinflated tires or other results of poor maintenance of their cars. This is far more important for us to recognize than is a single terrorist murder. It does not register much in the caricatured mind, since tire inflation is scarcely as exciting as the exploits of the Symbionese Liberation Army..."¹³ This statement is still true even in the wake of September 11, 2001, and subsequent terrorist attacks around the world. While nearly three thousand people lost their lives in that horrible act of violence, we are not similarly horrified by the fact that some 30,000 people will die this year in automobile accidents. Our brains are naturally inclined toward large threats and have difficulty recognizing those that appear slowly or in abstract ways. This is exactly the problem not only with the world we are creating, but also with much of the technology we have invented and are in the process of producing.

Ornstein later collaborated with science historian James Burke on the book, *The Axemaker's Gift*, exploring how technology has helped to define and alter our conscious perception of the world. Discussing the difficulties in rectifying the schism between our frames of consciousness and technology they make it clear that, "we are mentally so separated from the natural world around us by the axemaker gifts [technology] which have, over millennia, shaped every aspect of our lives, that both the gifts themselves as well as a change of consciousness need to be parts of the resolution."¹⁴ It is only by shifting the way our minds perceive the world that we can resolve the conflicts that science and technology give birth to.

Some of the most interesting and informative research on worldviews has been done by psychologists Paul Ray and Sherry Ruth Anderson. In their book, *The Cultural Creatives*, they define three primary worldviews dominating North American culture. Questioning some 100,000 respondents over the course of a decade, Ray and Anderson discovered that roughly 25 percent of people would identify themselves as having a Traditional worldview, while 50 percent felt they had a Modern worldview, and the remaining 25 percent were trying to define a new worldview. Ray and Anderson label this third group Cultural Creatives, because they believe this group will be driving the cultural changes that occur in the coming century as we shift from a society dominated by a Modern perspective to one dominated by something else.

Ray and Anderson describe the Traditional worldview as "...a culture of memory. Traditionals remember a vanished America and long for its restoration. They place their hopes in the recovery of small-town, religious America, a hazy nostalgic image corresponding to the years from 1890 to 1903. This mythic world was cleaner, more principled, and less conflicted than the one that impinges on us every day today."¹⁵

In contrast, those with a Modern worldview "...are the people who accept the commercialized urban-industrial world as the obvious right way to live. They're not looking for alternatives. They're adapting to the contemporary world by assuming, rather than reasoning about, what's important, especially those values linked to economic and public life."¹⁶

Breaking with both of these worldviews, Cultural Creatives, or Postmoderns as I will refer to them, "like to get a synoptic view — they want to see all the parts spread out side-by-side and trace the interconnections. Whenever they read a book, get information on-line, or watch TV, they want the big picture, and they are powerfully attuned to the importance of whole systems."¹⁷

Encompassing and even wider perspective is the Integral worldview which, as Integral philosopher Ken Wilber describes in *A Theory of Everything*, sees “Life is a kaleidoscope of natural hierarchies (holarchies), systems, and forms. Flexibility, spontaneity, and functionality have highest priority. Differences and pluralities can be integrated into interdependent, natural flows.”¹⁸

Changes in worldview bring new discoveries in science, which foster new technologies, which change the environment, changing the way we inhabit the environment and altering our culture, augmenting our minds, and changing our worldview. The process repeats infinitely, but, as we can see when we look out the window, the pace of this cycle seems to be accelerating. Most importantly, if our worldview fails to shift to one that is more encompassing, we can find ourselves behaving in a manner that is completely inappropriate for our new environment. Global warming is a perfect example of this, and a perfect example of clashing worldviews. Our use of technology has so altered the world that we cannot continue to live in it the way we have for the last century without severe consequences. Only by changing our perspective, and eventually changing our science, our technology, and the way we use them, can we escape this crisis.

The importance of recognizing that societies move through stages of cultural development lies in the fact that the world can best solve the problems it is creating by expanding its current worldviews for one that is eventually Integral — transcending and incorporating the valid insights of the Traditional, Modern, and Postmodern worldviews to view the world and its people holistically. This becomes increasingly imperative with the passing of each day. Unlike the situations our species has encountered in the past, we do not have the leisure of time on our side. When the Traditional worldview created problems, it did not tend to threaten the existence of the whole planet. Even the perilous world of nuclear proliferation that dominated the last half of the previous century gave us time to respond. While the science of nuclear power is Postmodern, its optimistic implementation as a defensive weapon and source of energy are completely Modern responses to a new technology. Fortunately for humanity and the planet, this technology remained in the hands of relatively Modern societies for much of its existence.

Now, with the dawn of a new century, nuclear proliferation is entering an even more dangerous stage as this technology increasingly falls into the hands of societies that are dominated by Traditional worldviews. Complicating matters further is the fact that the technologies we are implementing today, and those that we will be creating as this new century progresses, are often just as dangerous, if not more so, than nuclear power. Both genetic engineering and nanotechnology offer alarming potential for misuse, abuse, and accidental calamity.

Only by embracing the need for, and the desire to acquire, a wider, more Integral worldview will we be able to solve the problems we have created with our Traditional, Modern, and Postmodern perspectives. Moreover, because the rate of technological change continues to increase with every passing decade, we only have a limited window of time available to us for action. As powerful technologies become more widely available, we must strive to ensure that the most dangerous of them do not fall into the hands of those who would misuse them, due to their limited worldviews. We must also work to see that societies at every stage have available to them the technologies that will help them fully develop their potentials while wisely managing these new technologies to eliminate potentially dangerous circumstances.

Of course, an Integral worldview will inevitably create problems that can only be solved by transcending it as well. This Herculean journey we must embark on is only the first of many such journeys we need to take for the sake of the planet and our species. Fortunately, there is evidence to suggest there are several further stages of development available to us as individuals and as

societies beyond those already discussed. These stages, to steal a phrase from psychologist Abraham Maslow, are the further reaches of human nature — the Spiritual stages of development. Ultimately, we must embrace a Spiritual worldview if we are to realize the full potential of the human species and avoid the destructive tendencies that so often cripple our best intentions and better natures.

(For a more thorough exploration of worldviews, see [Appendix I](#), [Appendix II](#), and [Appendix III](#).)

The Five Main Worldviews

The following is a quick checklist that you can either apply to yourself or use to explain the idea of worldviews to others. None of these are hard and fast descriptions. Many people are in a transitional phase between two of the worldview stages, and these transitions can last for several years, or for a lifetime.

Moreover, I advise caution in two respects: the first is to avoid being judgmental of any of the stages. This is our natural reaction. If we have a Modern worldview we will take a pejorative attitude toward those with Traditional worldviews. It is pointless. There is always someone with a wider worldview. About 15 percent of the world population has a Pre-Traditional worldview, about 40 percent has a Traditional worldview, about 30 percent has a Modern worldview, around 15 percent has a Postmodern worldview, between 1-2 percent has an Integral worldview, and much less than 1 percent is at any of the four stages of a Spiritual worldview.¹⁹

This leads to the second caution, which is not to overestimate the depth and breadth of your own worldview. If anything, you are better off underestimating it. Again, these are just general descriptions and this is not a test. However, hopefully it will clarify what I mean when referring to the main worldviews.

You probably have a Traditional worldview if:

- You believe in a literal interpretation of your particular religious scripture (whether it is the Christian Bible, the Jewish Tanakh, the Muslim Koran, or any other ancient text).
- You believe that faith is more important than science.
- You believe that abortion should be illegal.
- You believe that homosexuality is a sin and should be illegal, or at the very least that gays and lesbians should not be afforded the same rights as others, particularly that they should not be allowed to marry.
- You believe that sex is something that should be reserved for marriage, and you may not believe in contraception.
- You tend to believe that moral issues are black and white, right and wrong.
- You long for a return to a less complicated way of life with clear and easy-to-understand social structures. Depending on your ideal, this could be a longing for a return to the 1950s, 1900s, or even the 1800s.
- You believe in a return to a “traditional” family structure, with a stay-at-home mother and a father who is the source of income and the principle decision maker.
- You believe in a Creationism explanation for the origins of life and the universe over the Theory of Evolution.
- You prefer more authoritarian forms of government and justice (i.e. the death penalty, and longer prison sentences for repeat offenders of non-violent crimes).
- You believe that the individual will must submit to the will of a higher power.
- You believe that life and human social structures are naturally hierarchical.
- You prefer a more isolationist approach to economic and cultural globalization.
- You would feel uncomfortable if someone described you as Modern or Postmodern.

You probably have a Modern worldview if:

- You believe that science has disproved most, if not all of the basic tenets of religious beliefs.
- You believe that religious texts must be interpreted in the light of science, and that the best interpretation is metaphorical.
- You tend to reject faith for rationality.
- You tend to reject religion and prefer secularism, or at least a more secular version of your religion.
- You believe that moral issues can be more than simply black and white, right and wrong.
- You don't "understand" homosexuality, but you prefer not to take rights away from other people.
- You feel that sex is something that individuals should decide on their own, and you believe in the use of contraceptives.
- You believe in the Theory of Evolution over a Creationism explanation for the origins of life and the universe.
- You believe that abortion should be legal.
- You believe in individual agency, and that individual will and desire should be constrained as little as possible by the government or society.
- You believe in the equality of women, but it isn't a priority for you.
- You believe the consumer lifestyle of the United States and other Western countries is the best way to live and structure society.
- You prefer an expansionist approach to economic and cultural globalization.
- You don't mind hierarchies as long as they don't get in the way of what you want to do.
- You would feel uncomfortable if someone described you as Traditional or Postmodern.

You probably have a Postmodern worldview if:

- You are searching for a spiritual path that incorporates religious beliefs but does not deny science.
- You prefer a secularism that embraces the spiritual aspects of religion.
- You believe that moral issues can be not just black and white, right and wrong, but gray and dependent upon context.
- You do not support the death penalty.
- You do not want to see any laws passed making abortion illegal.
- You see sex as something natural and human in all of its expressions, and believe in contraception.
- You believe in the equality of women in all aspects of life: work, family, religion, and government.
- You believe in a pluralistic and egalitarian society that embraces all people of all races, ethnicities, religions, and sexual orientations.
- You see nothing wrong with homosexuality or marriage between gays and lesbians.
- You believe in giving equal value to all cultures and see Western culture as part of a rainbow of cultural possibilities, and not its supreme expression.
- You tend to dislike hierarchies of various kinds.
- You believe that everyone's perspective should be honored.

- You like to try to “see” the world from different perspectives.
- You reject the consumer way of life and are searching for an alternative.
- You are very concerned with the ecological state of the Earth and the impact of humanity upon the natural world.
- You are critical of the current expansionist mode of economic and cultural globalization and see it as detrimental to non-Western nations.
- You would feel uncomfortable if someone described you as Traditional or Modern.

You probably have an Integral worldview if:

- You can see the difference between alternative worldviews clearly and understand how each successive stage embraces more truth than the previous stage.
- You seek to take the truths of each worldview and abandon their falsehoods.
- You acknowledge the conflict between science and religion, but see no need for conflict between science and spirituality.
- You seek to see how to supply the needs of each worldview and help people transition between the different stages.
- You see hierarchies as necessary but potentially pathological.
- Your understanding of moral issues rests not in religious rules, social laws, or cultural customs but in an understanding of the interconnectedness of all people.
- You actively seek to understand how the different aspects of our world are connected, including the ecological, economic, social, cultural, and personal.
- You are concerned with the individual and collective health of the entire human world as well as the living and non-living systems of the natural world.
- You would be amused if someone described you as Traditional, Modern, or Postmodern.

You probably have a Spiritual worldview if:

- Your first response to hatred is universal love.
- Your first response to anger is universal compassion.
- You are concerned with the suffering of all living beings.
- You recognize the interconnectedness of all living beings and the entire manifest universe.
- You are less concerned with the wants and desires of your individual ego-self and more concerned with the needs of all other living beings.
- You rely not upon a literal interpretation of religious texts but upon a direct experience of the Divine for your faith and beliefs.
- Your understanding of moral values is not grounded in religious rules but in a direct experience of the interconnectedness of all things, and in universal love and compassion for all suffering beings.
- You see the Divine in all people and all things.
- You are unconcerned with what people call you, because you have found that you identify less and less with the ego-self that people usually cling to as the ground of their beings because you have begun to realize a greater Ground of All Being that is all people and all things.

Spirituality, Ethics, and Globalization

The accident was over in seconds. The driver of the truck that cut them off didn't even notice as John and Mary's car spun off the highway and crashed head-on into a large sycamore. Mary regained consciousness ten hours later in the hospital intensive-care ward. She awoke only to be told that her husband had not survived the crash. Grief-stricken, Mary quietly requested that the doctors preserve a small sample of John's tissue.

The couple had been married for five years, during which time Mary repeatedly attempted to convince John they should have children. Unlike Mary, who had always felt she was destined to be a parent, John was against the idea of bringing more children into an already overpopulated world. Mary persisted, but to no avail.

Two months after the funeral, she met with the director of a fertility clinic specializing in cloning. With her donated egg and her husband's DNA sample, Mary was soon pregnant. She had briefly considered using a "celebrity sample," but the licensing fees were high, and really, did the world need another Brad Pitt to add to the 200 it had already? It didn't matter. She was finally having a baby. Nine months later, Mary gave birth to a baby boy who she loved deeply, in part because he was a baby boy who would eventually grow up to look just like the man she had loved so greatly but lost.

This little bit of science fiction may seem absurd, but whatever emotions and reactions this scenario raises, it also poses some serious ethical questions. Is it ethical to clone a human being? Is it ethical to clone a loved one who has died? Is it ethical to clone someone without his or her permission? How many times is it ethical to clone yourself? Is it only ethical the first time, tacky by the tenth time, pathological by the twentieth time, and unethical the fiftieth time? If only these questions were hypothetical. From all indications, it seems likely that a human being could potentially be cloned within the next ten to fifteen years.²⁰ I won't say successfully cloned, because there is no way of telling how the cloning process will affect this individual on a genetic level until many, many years later.

Cloning is only the most recent ethical conundrum to face us as we plunge headfirst into a new millennium filled with moral confusion. Every day, we are confronted with unspoken ethical questions that underlie our lives. For instance, is it ethical for the United States and Europe to use some seventy percent of the world's resources and contribute roughly forty-five percent of its greenhouse gasses while only maintaining ten percent of its population?²¹ Is it ethical to invest in a company that uses cheap labor from developing countries without labor laws to make its shoes, solely for the purpose of raising its profit margin? Is it ethical to take supplies from the office if the company you work for hides profits in foreign countries to avoid paying taxes? Is it ethical to fudge the facts on your taxes or for CEOs to use offshore accounts to hide their wealth from the IRS? Is it ethical to invest in a company whose primary product causes people to die slowly, like a tobacco company? Is it ethical to work for a company that makes weapons, like handguns, automatic rifles, or land mines, that will be used to kill people, including innocent and unsuspecting children?

These questions are phrased in the extreme, but we are challenged with variations of them each day. As we move into this new century, more ethical questions will assail us, and they will become increasingly complex. We will be confronted with questions whose answers will not only affect the lives of ourselves and our families, but which will affect the entire world. For instance,

is it ethical to change the DNA of our children before they are born, and pass these changes down to future generations? If it is, what sorts of changes are ethical? Is it ethical to change a sequence of a gene coding for a disease or the extension of life, but not to change those controlling height, eye color, or skin color? Is it ethical to insert a gene from another species?

It's possible that you have answers to all these questions. If you do, the interesting thing to note is not what you believe but why you believe it. The way you respond to ethical dilemmas depends on your ethical perspective, and your ethical perspective is informed by your *worldview*. The deeper your worldview, the deeper your ethics.

There are a fascinating number of ways of looking at the world, and each of these worldviews engenders a different way of engaging our lives. The manner in which we live our lives — the choices we make of what to do and what not to do — is our ethics. Our worldview informs, and in many ways constructs, our ethics, the system of morals with which a person interacts in the world.

While there are a number of different worldviews, contrary to what many postmodern relativists might suggest, not all are equal. The widest worldview, the one with the greatest breadth and depth of perspective will have a superior insight into ethical dilemmas. The Modern, scientific worldview apprehends truths that a Traditional, pre-scientific perspective simply cannot acknowledge. Likewise, a neo-scientific worldview, an Integral-Spiritual perspective, is open to truths that science has no means of measuring, and science falls apart without measurement.

As economist and philosopher E. F. Schumacher pointed out in *A Guide for the Perplexed*, "...the methodical restriction of scientific effort to the most external and material aspects of the Universe makes the world look so empty and meaningless that even those people who recognize the value and necessity of a 'science of understanding' cannot resist the hypnotic power of the allegedly scientific picture presented to them and lose the courage as well as the inclination to consult, and profit from, the 'wisdom traditions of mankind.'"²² A deeper worldview sees the validity of both the scientific tradition and the wisdom traditions.

We are living in a world that is integrated at every level and to survive in it, we must acquire an Integral worldview and an Integral ethics. With these tools we can then begin to create a vision of the future we might want to forge from the slag we are rapidly creating of our world. To accomplish this, our worldview must eventually become not simply Integral, but Spiritual. A Spiritual worldview is one that sees the full depth of the universe, from matter to life, to mind, to Spirit. This progression is the Great Chain of Being of the world's wisdom traditions.

Philosopher Arthur Lovejoy describes it in his classic book *The Great Chain of Being* as a universe composed "...of an infinite number of links ranging in hierarchical order from the meagerest kinds of existents, which barely escape non-existence, through 'every possible' grade up to the *ens perfectissimum*,"²³ or Absolute Being. Each thing, each atom, each life, each mind, is whole within itself, while at the same time part of a greater whole. This Great Chain of Being fills the entire universe top to bottom. This universe of infinite connection and infinite depth is the one that is around us and within us at every moment. Our awareness of it is, in many ways, our awareness of our own being. And more importantly, our awareness of our being in relation to all being.

An Integral-Spiritual worldview is one that attempts to see the whole of the universe at every level of its depth, and every aspect of it being, not simply its physical dimensions. Furthermore, it is a worldview that supports an ethics capable of coping with the Gordian knot of moral issues that an interrelated world creates.

The truths of each worldview are the basis of its ethics. Consequently, the worldview with the greatest depth of understanding will be the one with an ethics that has the greatest depth of

meaning. The significance of this is extremely important. The greater the depth of a worldview and ethics, the more appropriate it will be for understanding and engaging the world. To be clear, I am not suggesting a Rousseau-like return to some historically earlier worldview, nor am I recommending the abandonment of Enlightenment and post-Enlightenment scientific empiricism. I am not promulgating an Eastern over Western perspective, nor am I advocating an adherence to religious, philosophic, or scientific dogma. Plainly put, I am saying that the world we have created, and more importantly the world we will be creating in the coming century, requires a whole new worldview that transcends, yet still encompasses the valid truths of the previous, more limited worldviews.

Our brave new century, our Chrysalis Age, requires a worldview that is capable of understanding the unlimited connections being created between nearly all the spheres of life. This is the Integral worldview. Our world is also in desperate need of an ethics that is not based in religious dogma, philosophical rationalizations, scientific absolutism, or free-market abstractions, but is instead grounded in a direct apprehension of the interconnectedness of all things. This is an Integral ethics. Unfortunately, when the subject of ethics is mentioned at all in reference to globalization and the transformation of the world it tends to be stuck in either a Modern, highly utilitarian sort of ethics, or a dysfunctional postmodern ethics caught up in cultural relativism.

For example, one of the things that struck me while sitting through a conference sponsored by the International Forum on Globalization²⁴ was that two words were suspiciously absent from the day-long symposium: “ethics” and “spirituality.” While I can understand the absence of spirituality from the discussion, as it isn’t the first thing most people consider when talking about globalization, I couldn’t understand the absence of a discussion about ethics. The debate on globalization is by its very nature a conversation about ethics, but few people, whether pro-globalization or anti-globalization, are willing to admit this openly. It seems we are assumed to be trapped in an ethical vacuum when making decisions about how to organize the world. This is an extreme misplacement of our concern.

We should be concerned about globalization because of our ethics, not for intellectual or emotional reasons. I give IGF and many of the speakers at the conference a great deal of credit for attempting an Integral critique of globalization, but no criticism can be fully integrated without considering at least ethics, not to mention spirituality. The pro- and anti-globalization sides each have their own view, for their own reasons, and both assume they are “right.” Without a discussion of ethics, it is impossible to tease out the truths of either side.

What is worse, in my opinion, is that many in the anti-globalization camp, while attempting to defend the cultural integrity of developing nations from the modernizing (and mostly Americanizing) forces of globalization, often fall into a great cloud of ethical relativism. In a discussion on how developing nations were being affected by globalization, an audience member asked a panel how we, as culturally modern people, were to respond to the fact that many developing nations engaged in activities we found morally abhorrent. The panel was, unfortunately, in relative agreement on its relativism. They strongly felt that while the cultures of many developing countries engage in activities we find difficult to stomach, particularly where the rights of women are concerned, these problems are for individual cultures to work out in their own ways, regardless of how much these actions might repel us. This is, I believe, the dysfunctional Postmodern worldview at its worst.

While the Traditional and Modern worldviews see their cultural modes as superior, the Postmodern worldview tries to see value in all cultures and ways of being. This is a useful and valid perception. Unfortunately, a dysfunctional Postmodern worldview attempts to suggest not

simply that that all cultural modes have some value, but that they all have equal value. Thus, a liberal democracy that bans the cultural practice of female genital mutilation is seen as infringing on the rights of ethnic groups rather than defending the rights of young women.²⁵

An Integral worldview, one not trapped in relativism, sees that the Traditional, Modern, and Postmodern cultural modes all have things to offer, and things that should be discarded. An Integral worldview sees that while much of the cultural activities of the world's nations should be conserved as a precious heritage, where these cultures create suffering and deny equality to their citizens, they should be encouraged to change. The Integral worldview acknowledges that some cultures provide greater benefit for their members than others.

As the forces of globalization sweep over the planet, seemingly unchecked, no aspect of our burgeoning global civilization is left untouched. Arenas of life that hitherto had only marginal effects on all of us are now tied together in a complex dance of near chaos. The global stew of economics, politics, social structures, diverse cultures, and the natural environment is being heated to a roiling boil by a vast array of technologies that threaten to outpace our ability to understand their current meaning, much less their long term implications.

To emerge from this maelstrom, not merely in one piece but more whole than ever, we must not only acknowledge the storm but also our part in creating, maintaining, and exacerbating it. To do this will require not simply that we transform some of the social structures we use to create our world, but that we transform the very way we perceive it. This personal transformation, this transcendence of shallow ways of seeing for deeper ways of knowing, will, by necessity, demand that we challenge ourselves and others to examine in full our ways of being in the world, as well as our ways of perceiving it.

This challenge is not to be taken lightly. Change rarely occurs without some manner of challenge, and as we are in desperate need of extraordinary amounts of change, we will have to begin to supply *equal* doses of challenge in order to fully accomplish the tasks we will be called upon to achieve.

To create a tsunami of change, we will need wave upon wave of challenges. These waves of challenges should come at both the individual and collective levels. Moreover, they should be guided by the deeper ethics that the more encompassing worldviews engender. To simply provide challenge without guidance is to promote chaos on a level that can as easily lead to collapse as the emergence of new and novel ways of being. As our ethical rules guide our decisions, they will also guide our manner of challenging the world around us. Consequently, it will guide our vision of the world we wish to create and the actions that we take to accomplish the goals set out by this vision. Without a deeper worldview, we cannot obtain a deeper ethics, and without both of these, we cannot hope to create a vision of the future that contains any real depth, nor can we hope to bring such a vision to fruition.

(For a more thorough exploration of ethics see [Appendix V](#).)

What Is Progress? Or How to Tell a Hawk from a Handsaw

“I am but mad north-north-west. When the wind is southerly, I know a hawk from a handsaw.”

Hamlet in *The Tragedy of Hamlet, Prince of Denmark* by William Shakespeare.

In a world that seems, to many people, to have gone slightly mad, it is helpful to find some clarity about the ideas that shape it. The idea of progress is a concept that from one angle looks like a hawk and from another, a handsaw.

Progress, development, growth, and sustainability are four words that crop up repeatedly in discussions about the future of our world, particularly in the contentious debate about the merits of globalization. To one camp, globalization represents progress, pure and simple. To the other, it is, at best, a perverted growth of the current system and at worst, a reversion to the ill-conceived paradigms that gave us the worst evils of the first Industrial Revolution. Much of the problem in deciding who is “right” in this debate comes down to how poorly these four words are usually defined.

The way we think about progress shapes the way we respond to the scientific advances and technological creations that, in turn, shape the world we live in. As Herbert J. Muller wrote in his book, *The Children of Frankenstein*, “. . .not before Francis Bacon had writers proclaimed that man could steadily, indefinitely improve his state on Earth by his own unaided efforts, for only with the rise of science did they possess a clear means to steady progress. As the novel faith in progress began spreading over the Western world in the Age of Enlightenment, it introduced a fundamental difference in man’s attitude toward change. Through all the changes, beginning with the Neolithic Revolution, men had never really banked on change, never believed that it would naturally be for the better or would go on so indefinitely.”²⁶

Equating change with progress, which is really only development, we have created a society addicted to change. Everything must be the latest and the most advanced. We clamor for the newest styles of everything, even if the functions have failed to change for years. The latest fashions are certainly different, but what do they offer that is new? The latest computer? More power, yes, but how much power do you need for word processing? The latest smart phone? A better camera? More space for music? Lots of development but not much progress in sight. Where is the quality of life in all this? Do newer, more plentiful products mean that we are living better lives?

Mistaking development for progress is a rampant error among those who promote or caution against both. It is all the more devastating because few who promote or criticize progress tend to give much attention to the human aspect of the situation. Edward Goldsmith clarifies this with his comment in *Turning Away from Technology* when he says, “Progress is thereby seen as not having proceeded fast enough, for if it had, the problems would quite clearly not have occurred. Thus, increasing floods are seen as occurring because we have not built enough dams and embankments. If the crime rate goes up, this is because we have not built enough prisons, hired enough police, or installed enough burglar alarms. If people are sick, this is because they have not consumed enough pills or not built enough hospitals.”²⁷ Jacques Ellul summed up the essence of the problem in his classic book, *The Technological Society*, when he wrote: “If a whole people is oriented toward the search for justice or purity, if it obeys in depth the primacy of the spiritual, it does not suffer from the lack of material things, just as we today do not feel the inverse need of the spiritual.”²⁸

We define progress in part by our needs. What are humanity’s needs? What is progress for humanity? Is progress greater material wealth or closer families? Is it a manufacturing industry of

low-paying jobs or meaningful employment? Is it being able to shop for everything in one multinational megastore that you have to drive to or is it being able to walk to several locally-owned shops? Or is it ordering your goods on the Web and having them delivered to your door?

The gross national product (GNP) of a country is often touted as a sign of its progress. But is it, really? Everything that costs money is included in the tally, not just sales of products. A hurricane's destruction of homes and businesses can actually increase our GNP because of the costs of rescue, cleanup, and reconstruction. A person dying in a hospital raises the GNP. So does robbery, because you have to buy things again. There is no debit column to the GNP, particularly not in human terms.

However, Ted Halstead and Clifford Cobb have created an alternative measure of the quality of human life that reaches beyond merely economic interactions for its input. They call this the Genuine Progress Indicator (GPI). In addition to economic productivity, it attempts to examine data on social stability, social welfare, and environmental health, among other things.²⁹

Economic growth is often seen as a sure sign of progress, but this is a category error, as Lewis Mumford noted in his seminal, *Technics and Civilization*. Exploring the way the English ideas of progress were implemented technologically and economically in the colonization of India, he wrote that, "In the name of progress, the limited but balanced economy of the Hindu village, with its local potter, its local spinners and weavers, its local smith, was overthrown for the sake of providing a market for the potteries of the Five Towns and the textiles of Manchester and the superfluous hardware of Birmingham. The result was impoverished villages in India, hideous and destitute towns in England, and a great wastage in tonnage and man-power in plying the oceans between: but at all events a victory for progress."³⁰ Ironically this trend has been reversing to a significant degree under the economic pressures of globalization, with many jobs moving from England (as well as the US) to India, with similar local effects.

Globalization isn't about progress; it's about development and growth. Moreover, it is largely about development and growth out of proportion to the constraints of any particular system, or the system as a whole. This will increase the standard of living for some, decrease it for others, and leave many more right where they were. Progress would be the emergence of a system of technological and economic development and growth that did not distribute wealth primarily to those who are already wealthy and then to those who are lucky. Real progress will come when we learn to measure our technological development against the growth of the human population and gauge them both against the needs that define our human standard of living — not merely our access to food, water, and shelter, but our access to free time, companionship, the company of family and friends, our mental and physical health, and our spiritual fulfillment.

When most people use the word *progress*, they are usually talking about what I call development, or growth, or some combination of the two. Progress is rare, while development and growth aren't. In fact, when development and growth are engaged in excessively, they usually create conditions that actively retard the possibility of progress. Moreover, progress is not by definition beneficial to humanity. It implies a leap in complexity and novelty within a system, or the emergence of a new system. Unfortunately, this does not necessarily mean a new state of progress will be helpful to human societies, cultures, or individuals. For example, the progress, or complexity, created by the automobile has not always been advantageous for humanity.

Defining Complexity

In order to talk about progress, development, growth, and sustainability, it is helpful to define the terms of the discussion. But before we can talk about definitions, we need to introduce, just briefly,

the idea of complexity. Complexity theory is a relatively new branch of science that looks at nonlinear adaptive systems, or complex systems. Interaction is the key to complex systems. The greater the level of interaction between the constituent parts of a given system, the greater the possibility that it will organize to new levels of complexity. On the other hand, if there is too much connection, too much noise, the system can disintegrate into chaos. Likewise, if there is too little connectivity, the system can be bogged down in order and lose adaptability. This point between order and chaos is commonly called the “edge of chaos.” It is the sweet spot between order and chaos where novelty arises.

Imagine for a moment a system of information, like the shared DNA of a colony of bacteria. The information in the system can be represented by a bell curve. Too ridged or limited a field of information and the system stagnates in the face of adversity. Too much information in the face of adversity and the system falls into chaos. The “edge of chaos,” where emergent properties arise, is on the cusp of the bell curve, where there is enough information to spark novelty but not so much that the system is overwhelmed by chaos and falls apart. The system must also possess enough order to support this novelty, but not so much as to retard its development.

Complex systems can exhibit emergent qualities and experience organization to higher levels of complexity. An example of complexity in the Earth’s physiosphere would be the interactions between the oceans, geological forces, and the atmosphere in the creation of the world climate system. In contrast to complex systems, a complicated system may have a large number of constituent components, but the system as a whole tends to be predictable. An airplane is complicated while the weather and the economy are complex.

Systems theory, complexity theory, and the like are new paradigms, new tools that can be used to understand the universe, but they are not new worldviews. They are methods that can be used to see the world in a deeper fashion, but they are not the insight itself. Think of different paradigms as colored lenses placed before your eyes. The dark blue lets you see the sky in ways you hadn’t while the yellow makes the shadows of the snow visible. Complexity theory doesn’t replace the scientific paradigms that preceded it, but instead adds an extra layer of depth to our understanding.

(For a more detailed exploration of complexity theory, see [Appendix VII.](#))

Defining Progress, Development, Growth, and Sustainability

With this brief explanation of complexity, we can return to defining progress and development. *Progress* is a new order of complexity, or novelty, arising within systems, or systems of complexity arising from the interaction of non-complex components. This novelty occurs at the edge of chaos, between system stagnation and chaotic collapse.

Development is the refinement of existing systems in such a way as to increase the efficiency of the system as a whole, or of sub-systems, often in response to an external stimulus.

Growth is then the addition to, or expansion of, a system or sub-system. This cannot be accomplished without interaction outside the system.

Sustainability is the driving force behind the action of, and interaction between, progress, development, and growth. If any of the three is not attentive to the sustainability of the whole system, sub-systems, or individual components, there is the possibility of system-wide collapse due to either too much rigidity too much chaos. Sustainable systems do not need to be balanced on the edge of chaos, but they cannot be immersed in too much chaos or too much order.

Confusing the traditional definitions of progress even more is the notion of *quality of life*, which is what is usually meant when the words progress or development are used. Quality of life

is what it sounds like. There is no real measure of how good our lives are, but we can take an Integral approach and look at them from a couple of perspectives. What is the quality of the physical environment we live in? What is the government we live with like? Is it democratic or totalitarian? Does it allow equal access to power, or is its access to power skewed toward those with wealth? What is our cultural setting like? Do we find ourselves the focus of racial, ethnic, or religious hatred? Are women valued in the culture? Are the elderly? What is our personal experience like? Do we have adequate access to food, clean water, and shelter? Do we have enough wealth to be comfortable? Do we have opportunities for education and employment? Do we have a stable family life? Is our community safe to live in? These are just a few of the aspects that contribute to our quality of life, and few, if any, of these are normally considered when talking about progress and development.

Holons and the Four Quadrants of Being

Now that we have some definitions of progress, development, growth, and sustainability a few examples will clarify their meaning. To do this, it will help to introduce a few new concepts — holons, and the four quadrants of being.

As a small boy, one of my favorite toys was a Russian matryoshka doll. It wasn't mine. It belonged to friends of my parents. I could only play with it when we visited, so I relished the time spent with it. It fascinated me that they could fit ever-smaller dolls, each inside the other. I remember being amazed the first time I played with them ... every time I opened a doll I found another one packed within it, and I was always a little forlorn when I eventually discovered the final doll. It seemed to my 5-year-old mind that if they could make a doll that small, they should be able to carve one just a size smaller. And, while they were at it, they could certainly make larger ones. In my fertile imagination I envisioned a giant doll, the size of a house, with hundreds of small dolls held within, each one smaller than the last until the smallest, like the proverbial angel, could fit on the head of a pin.

A matryoshka doll is a good analogy for the subject of holons. A holon is a whole, that is also a part of something else. Independent scholar Arthur Koestler coined the term by combining the Greek word “holos,” or whole, and the suffix “on,” which means being part of. As Koestler explains, “A ‘whole’ is considered as something complete in itself which needs no further explanation. But *‘wholes’ and ‘parts’ in the absolute sense do not exist anywhere*, either in the domain of living organisms or in social organizations. What we find are intermediary structures on a series of levels in an ascending order of complexity: sub-wholes which display, according to the way you look at them, some of the characteristics commonly attributed to wholes, and some of the characteristics commonly attributed to parts.”³¹

These are holons, and everything is a holon. Koestler's point about them being ordered in a hierarchy is also important. Things, holons, are not simply randomly arranged. Atoms are parts of molecules, which are parts of cells, which are parts of organs, which are parts of humans, which are parts of families, which are parts of communities, which are parts of nations.

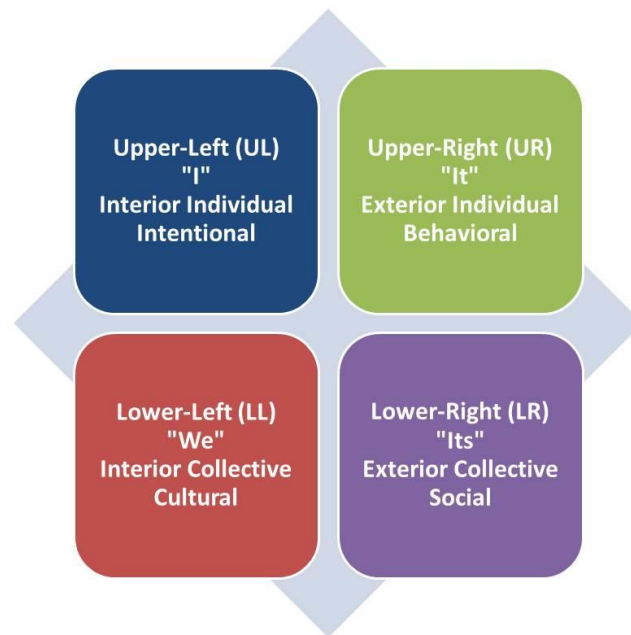
This hierarchy of complexity is important for a number of reasons ... primarily because evolution of the universe flows in one direction only. Holons always evolve to higher levels of complexity. Molecules evolve to cells. Cells to plants. Plants to ecosystems. Or, in the case of humanity, from matter to life to mind.

Ken Wilber believes that the universe exists in relation between four primary modes of experience. He calls this the “four quadrants of being,” or “four quadrants of knowledge,” explaining that individuals and collectives *both* have interior and exterior aspects. This then gives

us the four quadrants of Interior Individual, Interior Collective, Exterior Individual, and Exterior Collective.

“Thus we have four major quadrants or four major aspects to each and every holon.”³² The *Interior Individual* is the intentional or psychological realm, the world of “I.” The *Interior Collective* is the cultural realm, or the world of “We.” The Exterior realms are the physical world of “It,” the *Exterior Individual* being of the body and physical world, and the *Exterior Collective* being societies and social structures. This “It” realm is the one that science has traditionally focused on because its facts are easier to verify. Additionally, each of these quadrants is cross-correlated at equivalent levels, the levels of being, “...so that emotions ‘go with’ limbic systems and concepts ‘go with’ the neocortex...”³³

The Four Quadrants of Being



Essentially, Wilber is saying that all of the things we experience have at least a personal, cultural, social, and physical dimension. Moreover, he is saying that any analysis that fails to take these four dimensions, and their attendant depths, into account will be strikingly partial and incomplete, however much truth it may contain.

For example, an analysis of poverty and welfare in the United States that focuses on only one of the four quadrants will necessarily present a lopsided view of reality. An Integral analysis of poverty will include: a personal assessment of the interior mental states of those who are poor (as well as those who interact with them), an analysis determining how local, regional, and national culture impacts poverty, an investigation into the ways in which the dominate social structures and programs both exacerbate and combat poverty, and finally, a raw, statistical analysis of the empirical data of poverty, from housing and nutrition, to the relationship between poverty and crime, to the cost of government programs.

Examples of Progress

Having examined holons and the Four Quadrants of Being, we can now look at specific examples of progress, development, and growth in the physical, the personal, the cultural, and the social realms.

In the *physical realm*, examples of progress include: the evolution from matter to life, the emergence of a global atmospheric system capable of supporting life, the emergence from life to mind, and ecologies that emerge suitable to their respective environments, from jungles to deserts to the ocean floor.

In the *personal realm*, examples of progress would be: cognitive shifts between developmental stages of worldview, i.e. from childhood, to adolescence, to adulthood etc.; the expression of creative insights; and the expression of cognitive, psychological, informational, or spiritual insight in novel and complex ways.

In the *cultural realm*, examples include: cognitive shifts of sociocultural worldviews, i.e. from Traditional to Modern to Postmodern; the shift from reverence of the male to reverence of male and female; the shift from reverence of nature to reverence of all life; and the cultural shifts from affiliation for the family to affiliation for the community, to fidelity to the nation, to loyalty to the whole of humanity.

In the *social realm*, examples of progress would be: the shifts from theocratic to monarchic to democratic forms of government; the increasing representation of the individual in the process of government; a greater balance of the responsibility and rights of individuals with the rights and responsibilities of society at large; and the larger connections between individuals and groups to create novel systems.

Examples of Development

Examples of development in the *physical realm* would then include the continued adaptation of organisms to their changing ecologies and environments and the continual adaptation of the global weather system to changes in the levels of greenhouse gases.

In the *personal realm*, examples would be the refinement of skills and talents and also the realizations of ego-self nature resulting from self-inquiry.

In the *cultural realm*, examples of development would be changes in rituals and religions to embrace more inclusiveness; the shift experienced as reverence for women increases in patriarchal cultures; and the shift as religions slowly change to accommodate women into positions of leadership and equal participation.

In the *social realm*, an example of development would be the refinement of the structures of government that extend the concepts of progress to all levels of a society regardless of sex, race, religion, ethnicity, or sexual orientation.

Examples of Growth

Examples of growth in the *physical realm* would include the expansion of ecologies across regions, the expansion of organisms beyond their original ecology, and the physical and biological expansion of an organism from birth through maturity.

In the *personal realm*, examples would be physical and psychological growth from birth to maturity, and the acquiring of skills, talents, knowledge, etc.

In the *cultural realm*, an example of growth would be the expansion of cultures through war, trade, communication, travel, colonization, or settlement.

In the *social realm*, examples of growth would include population expansion due to increased birth rate or the conquest of other societies, and increases in personal wealth as well as access to resources.

Differences between Progress, Development, and Growth

A commonplace example of the difference between progress, development, and growth is the automobile. The invention of the internal combustion engine was not *progress* but merely development. It was not a novel system, and while it was complicated, it was not complex. It was a development in the creation of energy for use in industry and transportation, much like the steam engine or the electric motor. While the individual automobile was not complex, millions of them would eventually create novel changes in the larger system of the country.

Henry Ford refined the process of manufacturing cars (*development*), and this resulted in wider availability of cars to people. Increases in the number of cars (*growth*) resulted in increases in the need for roads (*growth*) and plentiful supplies of oil. This growth of cars and roads led to a new order of complexity (*progress*), allowing easy transportation around the entire country. This growth increased beyond the levels of *sustainability* and resulted in traffic jams (overloads of order) and contributed to global warming (overloads of chaos).

The way we think about progress, development, and growth will largely determine our future because it will influence the choices we make and the paths we follow. Our current paths are leading us away from real progress and toward a sham version of it, which consists almost entirely of massive growth and some small amount of development. This is not to say that the increasing complexity of the world will not result in genuine progress, such as might arise from a world of interconnected and highly advanced computers with a simulacrum of intelligence. However, such a leap in complexity in no way guarantees increased prosperity for humanity at large and may instead provide scenarios that threaten human well-being.

To change the world we have to contemplate the idea of progress. Through contemplation we can avoid Hamlet's existential angst, bypassing both feigned and real madness, to know for ourselves the difference between a hawk and a handsaw.

Contemplation on Progress

Take a few minutes out of your day and contemplate the relationships between progress, development, growth, and sustainability in your own life. Do you feel like you are experiencing progress on a personal level? If so, in what ways? Are you engaged in some action of development or some process of growth? How so? Are these forces interacting in a balanced, sustainable way? How are these forces playing out in the relationships you have with your family members and your friends?

Look around at the world you live in — your town, city, or state. Do you sense progress? What kind of progress? How do you define progress, and how does it compare to what you are seeing in your city, your state, or your nation? You may hear about developed and developing countries around the world, but do they seem to be developing? Are they experiencing growth? What about progress?

What are the factors that contribute to growth, development, and progress in the world? Do you think the world is progressing, or simply growing? Do you feel that it is developing, and if so,

how? Are these forces pushing our world system into chaos, or are they drawing us into a stagnation of rigid order? What can we do to contribute to the world system and all its nations in an effort to remain sustainable or evolving and raise the quality of life for our fellow global citizens?

Take a little time to investigate the way the lives of the people in your family have changed over the last century. Begin with your great-grandparents, and compare their lives to those of your parents. Look at the ways their lives changed technologically, socially, culturally, and physically. Then compare their lives to your own life. Obviously your life is different from your great-grandparents' lives, but how? Do you feel it is better? For what reasons? How would you define progress, development, growth and sustainability when looking at the changes between the different generations of your family?

Apocalypse vs. Utopia

“And I beheld when he had opened the sixth seal; and, lo, there was a great Earthquake; and the sun became black as sackcloth of hair, and the moon became as blood; and the stars of heaven fell unto Earth, even as a fig tree casteth her untimely figs, when she is shaken of a mighty wind. And the heaven departed as a scroll when it is rolled together; and every mountain and island were moved out of their places.”

The Holy Bible, The Revelations, 6:12-13

The sunshine was like an ocean of light, drowning everything beneath the sky, washing out the green of the fields, and distorting the fences in the distance with its heat. Beneath my grandparents' twin oak trees the heat felt bearable, the shade frequently supplanted by a warm, errant wind. The warmth mattered little because I barely noticed it. I hardly noticed anything. I was reading, deeply engaged in a world that existed only on thin sheets of paper and in the space between my ears. I was reading of a place distant in time and space. A place where things were very different from the world I lived in.

As a boy, I was fascinated by science fiction. It wasn't so much the stories of alien worlds or intelligent creatures from other planets that interested me; it was the *ideas* that attracted me, particularly the notions about how the future might be. These usually came in two colors: the dark, broody tones of an apocalyptic future, or the bright, cheery hues of a utopia. Either way, they sparked my imagination and made me consider the reality of the world I was living in, how it might change, and what the causes for its change might be.

Because it was science fiction (and often, not very *good* science fiction), the change it espoused was usually due to advances in technology. Either technology would usher in a new golden age of prosperity for all, or it would plunge the world into some kind of technological nightmare where humanity was reduced to a cog in a vast and frightening machine. There is little realistic middle ground in science fiction; it isn't dramatic. Unfortunately, there is little realistic middle ground to be found in contemporary, nonfictional prognostications about the future, either. Drama isn't merely used to sell us science fiction about the future — it's used to sell us the actual future we are buying every day.

On the side of apocalypse you have people shouting that technology will be the end of us, that globalization will destroy the world, that the environment is falling apart at the seams, that we are becoming slaves to vastly powerful transnational corporations, and that the clash of cultures will shake civilization to its foundations. On the other side, you have the proponents of cheery utopia proclaiming that genetic engineering will cure all disease and provide abundant food for all, that computers and robots will finally allow us to work less and have more, that economic globalization will eliminate poverty, and that advances in technology will allow us to fix any problems we create in the environment.

The apocalyptic view is predicated on the notion that the utopian camp will succeed with its agenda. The utopians only see apocalypse if they are not allowed to implement their plans. One person's utopia is another person's apocalypse. How can this be, you ask?

By now, the answer should be obvious — worldviews. We all have notions of what a better tomorrow might look like, and we all have ideas about what constitutes an ill-fated future. How we define these notions depends on our worldview. The wider our worldview, the more things we will consider when addressing questions about the future. The ideas of apocalypse and utopia

proffered by Traditionals will be much different than those put forth by Moderns and Postmoderns. And it goes without saying that a vision of the future by someone with an Integral worldview will be different than one by someone with a Spiritual worldview.

Although there are positive trends socially, culturally, and technologically, particularly over the past two hundred years, many of them are reaching an asymptote of consequence. In other words, we're creating more problems than we are solving. These new problems can't be solved by simply getting rid of the changes we've made (as some neo-Luddite apocalyptic Cassandras would have us believe) or by plunging blindly onward (as the zealous techno-optimists suggest). The only way to solve the problems we are creating is to look at them from a new perspective — to look at the whole world, physical, natural, and human, from a wider and deeper vantage point.

Visions of the Future

We need a vision for the future that isn't hampered by apocalyptic nightmares or utopian daydreams. We need a vision for the future that is grounded in the reality of the world as it is, as well as the reality of how it can be. In developing this vision, it is useful to examine the notions of apocalypse and utopia that dominate our culture.

The three dominant worldviews are each proposing a different idea of apocalypse. In the West, the Traditional idea of apocalypse is often framed by Christian philosophy, and with the last book of the Christian Bible, in particular. Although the ideas of apocalypse are informed by different things in different regions of the world, Traditionals, whether Christian, Muslim, Hindu, or otherwise, tend to see the Modern way of life through a similar lens. Traditionals see a world filled with people no longer conforming to their perspective, no longer following their rules, and it quite reasonably upsets them. They tend to see everything as deteriorating, as a collapse of the standards that supported society in some previous time, some golden age. How bad they feel things are will determine how far back they set the date for this golden age, but in the Christian West, it can currently range from 1950 to 1850.

Because the Modern worldview is dominant and controls most of the levers of power in Western societies, it naturally undermines many of the fundamental ideals of Traditionalism. Thus many Traditionals feel that the world is falling apart. Traditionals prize religion while Moderns tend to prize secularity. Traditionals have rigid roles for women and men while Moderns want equality. Traditionals fear the mixing of cultures, and Moderns see culture as just another thing to be consumed. Traditionals also fear technology. They see rapid change as undermining social stability and creating ethical problems for which they can find no clear scriptural guidance. For many Traditionals, apocalypse isn't something they are predicting for the future, but the way they are describing the present.

The Modern vision of apocalypse is propounded on the idea that Traditionals might succeed in reversing the tide of "progress." Moderns do not deny there are problems in the world, but they feel that all problems can be cured with more of what we already have. Moderns want more technology, more economic globalization, more free markets, more privatization of social services, more individual freedom, more things to buy, more cheap deals, more choices in the supermarket, more cars, more everything. Moderns feel that anything less would be to drive the Western world into some kind of Dark Age.

Moderns feel particularly apocalyptic about any attempt to limit the sphere of their individual influence. Individual choice is very important to them. They believe that individuals should not have to curtail their choices to please the larger society. Instead, Moderns expect society to adjust to their individual desires. Those with a Modern worldview don't really believe in apocalypse

because they are too firmly convinced that their way of doing things will bring a better future. And, for the moment, their sheer numbers allow them the luxury of this perspective.

Journalist Robert Kaplan explains how much of a delusion this actually is. Kaplan has a rather pessimistic outlook on the direction the world is taking, informed largely by traveling to many of the places we read about in the newspapers and are silently thankful we don't live in. Comparing the current international situation with the one that existed before World War I, he writes: "As then, there are legions of techno-optimists celebrating the expansion of world trade and claiming that human ingenuity will solve our problems, neglecting to mention that human ingenuity usually arrives too late to solve the specific problem for which it was intended. Like then, new categories of products are available to an expanding world middle class, even as new sources of oil and other raw materials are discovered. Like then, a conventional wisdom says that the mounting interdependency of financial markets make large-scale conflagration impossible. Like then, beneath the surface of comforting, globalizing truths, the world is awash in dangerous new alliances."³⁴

As might be expected, those with Postmodern perspectives see possible apocalypse in the extreme Traditional and extreme Modern programs for the future. Postmodern deconstructions of Traditional social structures and Modern notions of progress reveal the limitations of each. Postmoderns tend to be censorious of Modern ideas of progress and technology, particularly the proposition that they are both inherently *good* or that they are merely *neutral*. Postmoderns are also very critical of economic globalization. The Postmodern approach to cultural globalization is also at odds with Modernism, seeking to embrace multiculturalism, while at the same time seeking to block the perceived cultural hegemony of the United States. This can put them in conflict with both Traditionals, who tend to seek cultural unity, and Moderns, who tend to value commerce before culture. The Postmodern perspective can have its extremes as well, suggesting the deconstruction of civilization itself, as in John Zerzan's *Running on Emptiness*. But the reconstructive side of the Postmodern perspective can be very healthy, as seen in Fritjof Capra's *The Hidden Connections* and Steven Best and Douglas Kellner's *The Postmodern Adventure*.

The point here is that the traps of the Traditional, Modern, and Postmodern worldviews cannot be escaped with the same kind of thinking, but only with something more comprehensive — an Integral worldview.

The Integral Vision

To create a vision of the future that can appreciate the fears and aspirations of the Traditional, Modern, and Postmodern worldviews, we need to cultivate the wider, more encompassing perspective of the Integral worldview. An Integral worldview doesn't want to turn back the clock and doesn't want more of the same, twice as fast. Integrals see apocalypse in ignoring the connections between the various causes and effects that the Modern program has created, even as they acknowledge that utopia is unattainable.

Like Traditionals, they are worried about all the things that Moderns promote, but they want to view them in context and with perspective, unlike Postmoderns who can tend to disdain context and accord all perspectives equal cultural, social, and moral weight. Those with an Integral worldview attempt to recognize that Traditional, Modern, and Postmodern worldviews have some very positive aspects, and they want to keep these. What they want to transcend are the negative aspects of these worldviews.

Rather than valuing religion the way Traditionals do, or deriding it as Moderns and Postmoderns tend to, Integrals want to value spirituality, whether religious or secular. This is

obviously even truer of those with a Spiritual worldview. Rather than suggesting a return to rigid roles for people, Integrals want to allow people to become whatever they are capable of being. Unlike Moderns, Integrals acknowledge that individuals must find their higher potential in harmony with the rest of society at large. They see society and the individual as mutually interdependent, just as they view all life.

H.G. Wells summed up this dichotomy in his socially speculative novel, *A Modern Utopia*. He wrote that “Above the sphere of the elemental cravings and necessities, the soul of man is in perpetual vacillation between two conflicting impulses: the desire to assert his individual differences, the desire for distinction, and his terror of isolation. He wants to stand out, but not too far out, and on the contrary, he wants to merge himself with a group, with some larger body, but not altogether.”³⁵

Integrals want to integrate themselves and the world, acknowledging their desires as well as their responsibilities. As for technology, they don’t want to turn back the clock scientifically as some Traditionals and Postmoderns suggest, but rather they want to foster a wise and conscious use of our knowledge and tools. Integrals feel that technology should be aimed not solely at financial profit, but primarily toward human profit and human happiness.

The most significant factor determining whether your worldview espouses apocalypse or utopia in the face of our changing world is how you define human happiness. Traditionals define human happiness around stability. They admire stable families, stable people, and stable societies. Moderns see happiness in personal choices and personal profit. Postmoderns see happiness in non-hierarchical relationships.

The ego-self of the Traditional is satisfied by knowing its place in a family or society and learning to enjoy it. The Modern ego-self is satisfied by proclaiming its independence, making money, shopping, and by acquiring status. The Postmodern ego-self is satisfied by swimming in a sea of multiple perspectives. The Integral ego-self sees its happiness in relation to everyone else’s happiness at every level of existence. Integrals appreciate stability, personal choice, and multiple perspectives but do not give them undue value. The Spiritual worldview is in the process of transcending its ego-self and so sees happiness *as* everyone’s happiness, their individual happiness being of the least concern.

Where Moderns see promise and profit in genetic engineering, Traditionals see a usurpation of God’s role and Postmoderns see human hubris on the verge of disaster. Integrals carefully balance the risks of each genetic technology against the benefits and are not afraid to admit that certain things are beyond our current ability to use wisely, regardless of how much money could be made from it, while others may actually be worth the risks of their implementation.

Where Traditionals see technological gadgets as an onslaught of incomprehensible tools they don’t really need, Moderns see them as an extension of themselves, as projections of their personality, and Postmoderns see them as a potential negation of our humanity. Integrals see gadgets as just that, gadgets: sometimes useful, sometimes annoying, but important only when they contribute to the quality of human life.

When Moderns use the Internet, they tend to experience information as happiness, while Traditionals find the amount of information oppressive, and Postmoderns relish the number of perspectives available at the click of a button. Integrals see the Internet a vast tool for connection, but also a wedge between personal relations in the real world.

When Traditionals see the environmental degradation we are wreaking on the planet, they feel a sense of loss. Moderns may be sad that there are fewer trees, but they see nature as another resource to be used. If its use eventually makes them happy, then any consequences must be okay.

Yevgeny Zamyatin summed this attitude up perfectly in his dystopian novel, *We*, when he wrote: “Man ceased to be a wild animal only when he had built the green wall, when we had isolated our perfect machine world from the irrational, hideous world of trees, birds, animals.”³⁶

This modern disconnection from nature has created a pathological relationship with the Earth. It is not so much that we have fled to the city that is problematic, but that we have designed our cities in such a fashion that it is impossible to connect on a daily basis with nature. Thus, all the biological support for our lives is removed from us by miles and miles of pavement and concrete. Not only does this create an anemic interior landscape, leaving our psyche deprived of a relationship it was evolved for, but it complicates the distribution of resources unnecessarily.

There is a solution to this split between city and country, urban and rural, but it is a difficult concept for many to embrace. The work of philosopher and architect Paolo Soleri’s suggests a possible path forward. His book *Arcology: The City in the Image of Man* is a visionary text, and a visual delight. Soleri designed what he called *arcologies*, blending the words and essential concepts of *architecture* and *ecology*. An arcology is a self-contained, self-sustaining city that functions in harmony with the surrounding physical and natural world. Integrals understand that the natural world is the necessary support system of humanity and that it must be used in a manner that promotes its regeneration as well as human sustainability.

Defined by its own happiness, the Modern utopian vision is sold to us at literally every street corner, on every billboard, in the ads of every magazine, and the commercials on TV, as well as the shows in between. Every available space is eaten up with advertising: the sides of cars, the walls of elevators, the clothes we wear, even shaven into the back of kids’ heads. This Modern utopia projects a vision of the future that could not be more blandly imagined.³⁷

It doesn’t promise us an end to world hunger; it promises us strawberries in winter and the same Big Mac in any country at any time. It doesn’t promise a roof for every family, it promises rent prices ever spiraling upward in search of the absolute maximum that a market will bear. It doesn’t promise jobs for all, but mandates a minimum amount of unemployed, limits social safety nets, and supplies a flood of skilled and unskilled labor positions to whatever country offers the lowest wages, lowest taxes, and the least environmental restrictions.

The Modern utopia doesn’t promise a healthy life, but instead a life of medical advances to offset the increases in disease caused by pollution. It doesn’t promise a vibrant natural world that humans can interact with on a daily basis, it promises urban sprawl, giant parking lots, and children on Ritalin being raised never knowing that vegetables come from plants and not the grocery store. It doesn’t promise enough wealth for all to live sustainably, it promises vast riches for a lucky few, decent wages for some, and a few dollars a day to half of the world’s population.³⁸

This utopia doesn’t promise us a future free of the fear of global warming, it promises us a future with more umbrellas and galoshes at cheaper prices. It doesn’t promise us a world where everyone has equal access to information, it promises us a world where information is a commodity to be controlled by those few corporations who own the never-expiring copyrights. It doesn’t promise change delivered at a pace human cultures and societies can manage, it promises to ram change down our throats like some pill from *Alice in Wonderland*, turning our species instantly into giants of the universe before we have even begun to learn to walk, sending us stomping and crashing through the world, leaving behind a trail of smashed lives as we tinker with our new-found technological toys.

These promises of utopia are nothing more than the world we have already created, sped up for effect. The promise is to deliver the upgrade faster and with a great deal less consideration or courtesy than provided with the current version. The fatal flaw of utopias is that they are all

envisioned as static and unchanging. They do not account for the fact that societies require change to grow and mature. The Modern utopia project turns this observation on its head, offering nothing but change, recognizing no wisdom beyond free choice and free markets, and granting no time or space for maturity. None of these gleeful, techno-filled promises will lead to utopia. However, it is also impossible to find paradise by turning our back on technology.

Some Postmoderns call for an elimination of technology. Their critics refer to them as Luddites, while they prefer to call themselves neo-Luddites. The Luddites were a loose movement of British textile laborers in the first decades of the 19th century. Outraged that their livelihoods were being undermined by mechanical looms, they fought back by smashing company equipment. If questioned, they would declare that it must have been General Ned Ludd, the mythical leader of the Luddites.

Ironically, modern neo-Luddites tend not to be laborers, but academics. In his book *Leisure: The Basis of Culture*, Josef Pieper pointed out, as early as the middle of the last century, that erosion of leisure time by the demands of a modern, mechanized society limited the ability to think about that society, to reflect on it, and to produce, or sustain, a culture within it. More than fifty years later, the situation has only become worse. It is nearly impossible to seriously reflect on the world we are creating because it so complex. Academics are not only given the time to contemplate the world, it is expected of them.

Calling someone a Luddite is the clearest way of indicating that you haven't really given much thought to the consequences that vast technological changes in a short period of time could have on the human species and the planet. Neo-Luddites may occasionally go astray in their recommendations to the problems posed by the technologies we are developing, but they do offer a scathing, and mostly accurate, critique of these technologies and their effects. Those neo-Luddites who ponder how to use technology in a way that is healthy for all individuals, cultures, societies, and the environment are approaching the issue from an Integral worldview. Those who fail to do this are behaving like true Luddites, smashing that which they fear instead of learning how to use it wisely. To fully understand technology, we need time to investigate and contemplate it, before and after we implement it.

While the appearance of machinery during the Industrial Revolution was a shock to many, we live in a world filled with constant technological changes. The technology of today that eliminates people's jobs is the liquidity of capital. Today's textile laborers lose their jobs to cheaper labor in less developed countries, not to machines. Of course, once robotic labor becomes more cost efficient than humans in poorer countries, we may see true Luddites again.

To an Integral worldview, and even more so to a Spiritual one, the utopias of the Modern worldview are an apocalypse waiting to happen. Integral and Spiritual worldviews redefine human happiness, thus redefining what sort of future is desirable. They also see more clearly the faults and limitations of earlier worldviews, and the problems they can cause. A realistic vision of the immediate future must be grounded in an Integral worldview and ethics. A vision of the more distant future will hopefully be grounded in a Spiritual worldview and ethics.

The utopias of the novels I read as a boy under my grandmother's trees talked only of technology or politics when they spoke of the future. They did not talk about spirituality. I suspect this is because few writers of science fiction have the courage to tread on such ground, coming as it does from a place where mechanistic science cannot clearly see. Our future will never be a utopia. St. Thomas More chose the term for his book because it meant "No Place." A perfect society cannot exist. But this does not mean that we cannot envision a better society, an Integral

society, or a Spiritual society, nor does it mean that given the time, effort, and wisdom, we cannot create one.

(For a brief list of fiction and nonfiction readings on utopia and apocalypse, see the Suggested Readings section, [Reading the Future](#). For more information on Paolo Soleri and arcologies see the chapter [Mystic, Prophet, Architect](#).)

Personal vs. World Transformation

In order to fully investigate and create a vision for our collective future, we need to first fashion a vision for our personal future. The transformation of the world is directly linked to our own personal transformation.

There is a consistent and tension-filled dichotomy between personal and social transformation. Those who advocate personal transformation, particularly spiritual progress, see it as a prerequisite to real social advancement. They feel that in order to truly help people it is necessary to change the way you see and relate to the world. They certainly do not object to social transformation, but they view it as something that cannot be engaged in wisely until one has obtained some amount of inner wisdom.

Those who prioritize social transformation do not generally disagree with the need for personal transformation, but they feel that what demands priority are the gross injustices of the world. They feel that people need food, water, and shelter more than personal growth, and this is hard to argue with. This dichotomy between personal and social transformation could not be any clearer than in the literature of globalization and spirituality. It is difficult to find any mention of spirituality in books on globalization, whether for it or against it, and it is just as difficult to find books on spirituality that deal directly with the issues of globalization and social change.

There are exceptions to this, such as Michael Lerner's *Spirit Matters*, Duane Elgin's *Promise Ahead*, and Peter Russell's *Waking Up in Time*. There are also books such as Bernie Glassman's *Bearing Witness* that clearly tie personal transformation to social action. Vimala Thakar's classic, *Spirituality and Social Action*, is another obvious exception, but in general this intellectual separation between the transformation of the self and the transformation of the world holds us bound in a state of either slow growth or rapid regression.

Thakar writes in the beginning of her book that "the cleverness of the human mind has led us to the complex, horrifying and all-encompassing crisis that we now face. The familiar solutions based on a limited view of what a human being is, continue to fail, to be pathetically inadequate."³⁹ We are in this state of ignorance because we are unwilling to acknowledge that "the fact is that life is a wholeness, an indivisible, non-fragmented wholeness in which every element affects every other and nothing can be pushed aside as irrelevant." She goes on to state that the only real alternative to the bland continuance of past mistakes that we pursue is to admit that "we can no longer escape the fact that we are all bonded, equal in wholeness."⁴⁰

This wholeness, this Integral vision, is what is required to truly transform the world. A fully Integral vision necessarily steps beyond the confines of the personal and social transformation dichotomy. It acknowledges both the personal and social, but also attempts to see these in relation with cultural transformation and the alteration of the physical and natural worlds. In short, an Integral viewpoint sees transformation as occurring in all four quadrants of being, in all the spheres of being, and at every level of development. (See the section [The Four Spheres of Being](#).)

With such a complicated array of problems and injustices facing us, the question becomes: "How can we each individually contribute to changing the world for the better?" Put another way: "If I want to change the world, what specifically can I do?"

This is a question best answered with another question: "What *can* you do?" Do you live in a democracy? Can you contact your local, regional, and national representatives about issues that concern you? Can you write letters to newspapers and magazines bringing Integral ideas into the discussion? Can you sign and organize petition drives for issues you care about? Can you help an

NGO in some fashion by sending money or volunteering for them? Can you start your own nonprofit organization to lobby and educate about an issue that concerns you? Can you continue to learn more about the world? Can you devote yourself to personal and spiritual transformation? Do you have special skills and talents that can be used to help change the world? Can you write a book about an issue from an Integral perspective? Can you write a novel that deals with Integral issues in an Integral way? Can you create art that expresses an Integral or Spiritual perspective? Can you write a play? Can you produce a play? Can you create a documentary or narrative film about Integral ideas? Can you create a web site devoted to Integral issues? How can you change the way you live your life to be more in accord with Integral and Spiritual perspectives? How can you help educate others about Integral and Spiritual issues? What *can* you do?

Chances are you can do quite a bit. Each of us needs to pick a means of action that best suits our skills, talents, temperament, and time. An important part of this will be transforming our lives on a personal level in a manner that supports our attempts to change the world around us. For instance, Buddha taught the precept of *right livelihood*, by which he meant that we should not perform work that results in the harm of others. If we are working at a job that undermines the goals we have for personal transformation, it will inevitably undermine the goals we have for transforming the world.

Buddhism also teaches that to transform the world we must first transform our minds. There are two separate meanings of this. The first is an internal meaning. If we want to transform the way we see the world, we must first transform the way we respond to it. For example, often when we first encounter a person, we will have an initial reaction that is negative, but after we get to know this person we find them to be quite wonderful. What has changed is not the person, but the way we perceive them. This is even more evident with something that is unchanging, like a film or a type of food. If we want to transform the world into something that we can find joy in, we must first transform the way we perceive the world, becoming less judgmental, more patient, more compassionate, more open minded. This is a core teaching of all the world's spiritual traditions and it flows directly into the second meaning of this teaching.

The second meaning of training the mind is that the world of human affairs is created by ideologies, by other minds working together to organize the world in a particular fashion. To change the world, one must change the ideologies that run the world. In order to do this one must change the way that others perceive the world. Transforming people's minds can be accomplished in a number of ways. The Civil Rights, Women's Rights, and LGBT Rights movements changed people's perceptions through protest, peaceful confrontation, rational argument, and artistic persuasion. By presenting their message in a public forum over time, they eventually built the necessary public support to pass laws that would grant equality to citizens regardless of race, sex, gender, or sexual orientation. These movements helped people change the way they viewed others who were not like themselves in order to change the way they treated these other people. Similar techniques will inevitably come into play in any attempt to transform the world with an Integral agenda.

Understanding Our World

Looking Without to Look Within

Having explored the need to develop a deeper worldview with which to understand the world around us, we now turn this perspective to the various aspects of our world in an attempt to briefly illuminate the ways we are currently transforming it. The following exploratory short essays are not intended to be exhaustive. They are somewhat fragmentary and collage-like. They are both informative and filled with commentary. Their purpose is to spark readers into thinking about the vast array of ways we create and change our human civilization, the ecosystems we inhabit, and the planet we live on.

These essays are organized around the conceptual framework of the Four Spheres of Being. The Great Chain of Being, the great holarchy of the cosmos, can be viewed as a series of concentric spheres of being, each nested within the other. Wilber refers to these spheres of matter, life, mind, and Spirit, as the physiosphere, biosphere, noosphere, and theosphere, respectively.

The physiosphere is the world of matter. Atoms, molecules, rocks, planets, suns, galaxies, and everything that, however complex in its functioning, is not quite life. The term biosphere was coined by geologist Eduard Suess in the late 19th century to differentiate the worlds of living and non-living processes. The geological processes of the Earth are complicated, and sometimes even complex, but they are not alive. The biosphere is the sphere of living matter. Bacteria, cells, plants, insects, animals, humans, ecosystems, and all that is alive compose the biosphere. This term was later revived by Russian biologist Vladimir Vernadsky in the 1940s, but its contemporary popularity rests on the work of Jesuit scientist and philosopher Pierre Teilhard de Chardin. Writing near the middle of the last century, Teilhard de Chardin applied the Great Chain of Being to Darwin's Theory of Evolution.⁴¹ He saw the arrow of evolution clearly at work in the rise of complexity from matter to life to mind and postulated that this arrow must inevitably give rise to Spirit, the ultimate culmination of which he referred to as the Omega Point.

Less esoterically, Teilhard de Chardin defined the noosphere, or the sphere of mind as the "Thinking layer," which has "spread over and above the world of plants and animals."⁴² This layer exists only in and between the minds of humans. It is a layer of thought, image, language, ideas, memories, concepts, culture, and society. This noosphere, this human layer of cognition, is supported by the biosphere and the physiosphere. Without the biosphere there would be no noosphere. And likewise, without the noosphere, the sphere of consciousness, there would be no theosphere, the layer of consciousness that is aware of the Divine.

The notion of a theosphere may be difficult to consider without some manner of supporting evidence. This supporting evidence is the *perennial philosophy*, the consistently reported perceptions the mystics and sages from throughout world's wisdom traditions, and more recently the studies and experiments of the fields of transpersonal psychology and neurology. Wilber suggests that the Great Chain of Being implies a rule of greater depth and less span — the noosphere dwarfs the theosphere much the way the physiosphere dwarfs the biosphere, which, in turn, dwarfs the noosphere.⁴³

A combination of the Four Spheres of Being and the [Four Quadrants of Being](#) provides the structure for the essays in the following chapters. The first of these aspects to be investigated is the physical world (*the physiosphere/exterior individual*), which explores the world of oceanic, geological, and meteorological forces that support all life, particularly human lives. Next is the natural world of living things (*the biosphere/exterior individual*), followed by the human world of societies and the clash between cultures created by globalizing forces and the effects on modern

society of communications technology in media and the mind (*the noosphere/interior collective*). There then follows an exploration of globalization in terms of corporate ecology and the world economy and an examination of the living conditions of humanity (*the noosphere/exterior collective*). Finally, there is a brief analysis of the dominant technologies shaping our future, such as genetic engineering, computer, robotics, and nanotechnology (*the noosphere/exterior collective*). The next section of the book, [*Inner Knowledge*](#), will present a series of essays and meditations exploring the *theosphere* and the *interior individual*.

A short contemplation is presented at the end of each of these essays. The goal of these contemplations is to provoke thoughtful consideration of the subjects involved by examining each particular aspect of the world, especially in regard to how we are individually and collectively transforming it. Hopefully these contemplations will prove helpful in envisioning an Integral perspective of the world as a whole.

Introduction to the Contemplations

“Constantly regard the universe as one living being, having one substance and one soul; and observe how all things have reference to one perception, the perception of this one living being; and how all things act with one movement; and how all things are the co-operating causes of all things which exist; observe too the continuous spinning of the thread and the contexture of the web.”

Marcus Aurelius, *Meditations*

Contemplation is the key to understanding the world and embracing wider worldviews. It is through contemplating the world that we can begin to understand the nature of its interconnectedness. If we do not have time to contemplate the world, then we do not have time to understand it, only react to it. We need to take time apart from our daily activities to sit and think about the world we live in. This is becoming more and more difficult as our modern days are filled to the hilt with a constant stream of activities required to maintain our worldly lives. We get up, travel to work, spend most of the day working for someone else, travel home, spend the evening watching television, surfing the Web, chatting on social media (potentially all at the same time), and then sleep for an all too brief period in preparation to do it all again. And when we have free time, we guide it toward activities that are designed to fill the mind rather than allow it to ruminate. We need time to reflect, to consider how our lives are unfolding, how our interaction with the world affects it, and how the world, in turn, affects us.

The contemplations throughout this book are intended to help facilitate the process of deepening our worldviews and are designed to be engaged in with the tacit understanding that Traditional, Modern, Postmodern, and Integral perspectives will respond differently to the questions contained within them. These different responses are expected and can be a gauge of growth and development as each contemplation is returned to over time.

Before starting any of these contemplations, make sure you have at least fifteen minutes to a half an hour where you will not be disturbed. This does not mean that you cannot be engaged in some other activity if your schedule is crowded. Driving a car or washing the dishes can be perfect times for contemplation. One should also take advantage of as many sunsets and walks out of doors as possible.

Give yourself a moment before beginning the contemplation to clear your mind of other distracting thoughts. Take a few deep breaths and consciously set these other things aside. If they are issues that continue to arise throughout your day, then you should make a special time to

address them with some sort of introspection, either alone or with someone to help guide you through them. When you have finished the contemplation, if you have time, take a few minutes and write down your thoughts in a journal. You can even do these contemplations as a writing exercise. Either way, a record of what you were thinking can provide you with a means of comparison and allow you to chart your own inner journey with greater accuracy.

Contemplation on Real vs. Manufactured Needs

Take a few moments and think about your needs. What are your basic needs? What are your physical needs? You need food and shelter and clothing. You need to be healthy and free from pain. What else? What about your emotional needs? You need love, affection, and companionship. What else? What are your intellectual needs? You need to feel valued for the work you do. You need to feel a sense of challenge. You need to feel intellectual stimulation. What else? You need free time to contemplate. What else? What are your spiritual needs? Do you need to meditate? Do you need to attend teachings or services? Do you need to be with other spiritual seekers? What else? Are these needs being fulfilled? To what extent?

Do you have a large house and a beautiful car, but no one to share them with? Do you have plenty of entertainment, but little time to contemplate? Do you need more than you have of anything? Do you have more than you need of anything? What needs do you feel are really yours and what needs are being pressed upon you? Do you really need a new car? Which of your needs can be fulfilled by buying something? Is the need to buy something really a need, or is it a desire? Is this desire healthy? Where does it lead you? What are your real needs and what are your manufactured needs? What needs come from your TV and which ones come from your heart?

Morning Contemplation

Between the time you wake up in the morning and the time you start your workday, take some time to contemplate your connection with the world. When you open your eyes, contemplate where your bed came from. How was it made? By whom and where? What about the sheets? Are they cotton? Where was it grown? Was it genetically modified? What about your sleeping clothes? How were they made? In what country?

When you go to the bathroom and turn on the shower, contemplate the origin of the water that comes from your faucet. Does it come from a well or is from a purification plant? What goes into the process of bringing water to your home? How does your use of water affect the world? Do you know how many countries have limited access to clean water? Do you know how many people do not have access to clean drinking water? Is the water in your city safe to drink? How is the water in your shower heated? Is it heated by gas or oil or electricity? How does this process pollute the air? How much does this process contribute to loss in air quality or the accumulation of greenhouse gases?

What about brushing your teeth? Where was your toothbrush made? What material is it made from? Plastic? How was the plastic processed? What packaging did it require? How was it shipped to the store you bought it in? What about the toothpaste? What is it made from and how? By whom? What did you do with the box it came in? What happens to the tube when you are finished? What country was your razor blade made in? Where was the ore for the metal mined and processed? What happens to it and all its packaging when you're finished with it? What about your deodorant? What went into making it? And what about your makeup?

How many people were involved in creating and supplying the few things you use to get ready in the morning? How much energy was used to create and transport them? How did these processes affect the Earth? What were the wastes produced by the products? How much of these products will become waste? What happens to all this waste?

What about the clothes you dress in? What are they made from? Are they natural fibers, or are they manufactured materials? Where were they made? Were they made in Italy or Mexico? Who were the people assembling them? Were they paid a fair wage, or were they paid as little as possible? Did the manufacture of these clothes create wastes or pollute the Earth? What will you do with these clothes when you are finished with them? How many people in how many countries were involved in making the clothes that cover your body? What about your shoes and belt? Are they made of leather? Are they made from a being that was once alive? Was that animal killed for food or for its skin? How long will this animal's flesh last before it can no longer be used? What will you do with it then?

How many people's lives have intertwined with yours just to get you ready for breakfast? How many parts of the world have touched your life in one morning? How many plants and animals have you interacted with at a distance? How has the planet been affected by your actions and choices? Try this contemplation each morning and extend it to other parts of your day.

The Physical World

The depth of our worldview informs our relationship with the universe at every level. The deeper our worldview, the more it encompasses, the greater our depth of understanding of the cosmos will be, and in turn, the greater our appreciation for our place in it. The physical world is the ground that supports all of the human structures we construct and it is essential we obtain an Integral understanding of it if we are to understand the natural and human worlds.

The resources of the physiosphere can be assessed in a number of ways, but for our purposes here, we will consider them as mineral (tin, copper, gold, etc.), energy (oil, coal, natural gas, uranium, and sunlight), clean air, ozone, and clean water (whether for drinking, raising crops, or maintaining the ocean's fishing stocks). There are generally two opposing views toward the state of the world's physiosphere. Environmentalists claim, with a good deal of data to back them up, that Earth has finite resources of minerals, oil, and coal. Their assumption, which isn't so farfetched, is that these things will eventually run out, and that we can't easily replace them when they do. I refer to the alternative view as the eco-optimist perspective.⁴⁴ Unsurprisingly, environmentalists tend to have a Postmodern worldview while eco-optimists are rather evenly split between those with Modern and Traditional worldviews.

The eco-optimists counter the argument of scarcity by explaining that not only have we been finding plenty of minerals, but that the price of them keeps dropping. They also point out that the known reserves of coal could last nearly 200 years, and the reserves of oil look like they will last for at least 35 to 50 years. By and large these points are accurate, but the problem that the eco-optimists fail to address is that these resources become more expensive to find each year we continue depleting them, and that their extractions become more expensive, as well. Additionally, the eco-optimists tend to ignore the use to which these resources will be put and the externalized pollution they will create — pollution that someone will have to deal with. The process for mining gold or lithium, for instance, is extremely land intensive and toxic. And continuing to use oil and coal as energy sources only ensures that greenhouse gases will be released, causing problems with clean air and global warming.

The process of industrialization has required the depletion of non-renewable resources. The use of these resources, either as energy sources or as raw materials for manufacturing products, results in pollution. This pollution then becomes a part of the physiosphere, creating a realm that the ancients did not foresee. To Earth, Wind, Fire, and Water, we might add Soot, Sludge, Toxins, and GHGs (greenhouse gases). Pollution is not simply waste. In an ecosystem, the waste of one organism becomes the food of another. Pollution is waste that cannot be used by any organism or ecosystem.

In economic terms, pollution is referred to as an externalized cost. Internalized costs are those that are carried by the producer of a product and are included in its price, being passed on to the buyer. Externalized costs are those that are borne by someone other than the producer and are not included in the price of the product. For example, as economist David Korten explains, "...a giant chemical company externalizes production costs when it dumps wastes without adequate treatment, thus passing the resulting costs of air, water, and soil pollution into the community in the form of additional health costs, discomfort, lost working days, a need to buy bottled water, and the cost of cleaning up what has been contaminated."⁴⁵

Waste from our many nuclear reactors is another unfortunate example of an externality, as it is so deadly that it must somehow be safely contained for thousands of years. In a more typical

example, the internalized costs of making and selling a widget would be manufacture, overhead, rent, packaging, shipping, and stocking. The externalized costs would be the wastes from manufacture, the waste that the shipping or packaging material becomes after use, the GHG emissions of the trucks used to transport the widgets, and the widgets themselves after they have outlived their planned obsolescence. All externalities become part of the physiosphere, and at some point will need to be dealt with. Unfortunately, the cleanup rarely falls to the people who actually put these externalized wastes in the environment in the first place.

On most issues, the eco-optimists and environmentalists are often sharply divided in their assessments of the state of the world, and fresh water (potable or otherwise), air quality, and global climate change are only some examples of where they differ. Environmentalists point out that there is a drastic shortage of clean drinking water in the world and an increasing population is likely to strain the limited supplies. Eco-optimists counter that societies with the cleanest and most plentiful drinking water are found in the industrialized nations. As one might guess, they feel it is obvious that industrialization is the key to solving not just problems of clean water, but all of the environmental problems the world faces. Moreover, they feel that Earth and all its ecosystems will be able to recover from any damage that we might do, or that this damage can be repaired by new technology.

Environmentalists, of course, believe that it is the process of industrialization itself that is causing all of the problems in the first place. The best among them are recommending alternative means of industrialization that eliminate externalities.⁴⁶ Eco-optimists tend to fear that this could completely slow down the world economy and upset the chances for the world's poor to ever have the lifestyle of developed nations. Of course, seasoned environmentalists will point out that it requires nearly three-fourths of the world's resources to maintain the developed nations in this lifestyle, and that these nations only represent 10 percent of the planet's continually expanding population. Their estimates indicate it would take roughly three to four Earths, all producing as many resources as our one does now, to allow the whole planet to live like those of us in North America and Western Europe do.⁴⁷

As for the state of the world water supplies, your opinion will be influenced not only by what data you review, but the worldview with which you approach it. The very idea of there being anything resembling a water crisis on a planet that is 71 percent water seems absurd at first glance. But since 97 percent of this supply is salt water, and only about .65 percent of it is available to human use, .62 percent as groundwater, the dilemma becomes a little easier to understand. The main problem is that the Earth's water resources are not equally divided and that the areas which tend to have the fewest reserves, or precipitation, also tend to be home to the poorest countries. Complicating this, the poorest countries are also the ones whose populations are most likely to increase in the coming decades. These are the very nations most at risk today and most likely to experience a crisis in the future.⁴⁸

Clean air is another divergent topic between environmentalist and eco-optimists. There is no doubt that industrialization and urbanization worsen the air quality. Any industrial process that releases wastes into the atmosphere is decreasing air quality. This applies to our SUVs as much as it does to the oil refinery or textile plant. Likewise, the air quality of a region tends to go down with the increase of urbanization.

Environmentalists contend that large quantities of waste released into the air decrease the sustainability of various ecosystems as well as lowering the quality of human life. They often point to the urban areas of developing countries like Mexico City and Bangkok, noting the amount of lead in the air that enters the human system and affects physical and mental development. Eco-

optimists counter this argument by claiming that the countries that have the cleanest air are now the ones with the largest industrial base. They explain that it is only when a country reaches a certain per capita income that it develops the technology, affluence, and civil society capable of instituting the laws necessary to balance environmental concerns against industrial desires. They also claim that industrialization, in and of itself, leads to more efficient and less polluting technology.⁴⁹

While it is true that the air quality of Western nations has increased, thanks to both environmental laws and more sophisticated technology, we need to keep in mind that the Western world only accounts for some 10 to 15 percent of the world's population. While the Earth's systems have been able to handle our industrialization, we cannot automatically assume that these systems, nor our human populations, can handle the stress created by the rest of the world's nations (China and India in particular) going through the same industrialization process. This is even more unlikely given that many of these developing nations will be adding significantly to the world's population as the century progresses.

Eco-optimists are correct when they connect increased affluence from industrialization to a feedback loop engendering greater environmental protection and more efficient technology, but they fail to mention that many, if not most, of the developing nations where the environment is in a state of crisis lack the very root conditions that allowed the Western countries to accomplish this "magic trick." Without democracy, the rule of law, and a firm civil society, developing nations are unlikely to follow the same path as their Western industrial predecessors. And with populations considerably larger than the Western countries, they are likely to require far greater amounts of industrialization, creating far more pollution, airborne or otherwise. While air quality is getting better for some of us, it is terrible for most and likely to remain so, or worsen.

Global warming is the most divisive issue between environmentalists and eco-optimists. Global climate change is a predicted response of the Earth's climate systems to the increase in human-made gases such as carbon dioxide, methane, and nitrous oxide that are released into the atmosphere. These gases heighten the greenhouse effect of the Earth's atmosphere, raising the surface temperature of the planet. The greenhouse effect is the natural tendency of the Earth's atmosphere to trap the heat of the sun's energy, which helpfully keeps the planet warm enough for life. Without the greenhouse effect the planet would be about 50 degrees Fahrenheit cooler than it is now. However, if it were not for evaporation and other climate processes the surface temperature would be a stifling 130 degrees Fahrenheit instead of the 55 degrees of recent geological history.

For nearly three decades there has been a heated debate as to the validity of the global climate change theory and the evidence collected to support it. Today, in the face of repeated reports by the Intergovernmental Panel on Climate Change, even the staunchest eco-optimist is forced to admit the reality of global warming.⁵⁰ The only people who are seriously arguing that it is a hoax are those being paid substantial sums by the oil and coal industries or those who desire the undue attention granted them playing devil's advocate on conservative media outlets.⁵¹

The evidence for global warming and climate change due to human activity is compelling, to say the least. The average temperature of the planet has risen over the last century by 1.4 degrees Fahrenheit and will continue to rise between 2 and 11 degrees as this century progresses, depending on the level of GHG emissions. While 1998 has so far been the hottest year on record, eleven of the past twelve years were the warmest recorded since 1850. We also know that the average world precipitation has increased, and that coastal waters have risen approximately four to eight inches, depending on region, over the last 150 years. This rise in sea level will undoubtedly continue and could increase by as much as two feet by the year 2100. Levels of GHG emissions have increased

by 26 percent since 1990. Of these greenhouse gases, the US produces nearly 19 percent of the total, while maintaining less than 5 percent of the world's population. Furthermore, in 2012, half of the ice in the arctic melted decades faster than previously predicted.

We also know from satellite surveys that the amount of infrared radiation escaping the planet has decreased by 30 percent between the 1970s and today. We know from ice core samples taken in Antarctica going back for some 800,000 years that every time there was an increase in the level of carbon dioxide in the atmosphere, there was a subsequent rise in the surface temperature of the planet. Additionally, the atmospheric concentration of CO₂ over this time averaged 270 parts per million (ppm), while today it is over 400ppm.⁵²

The question is not whether global warming is happening, but what we can do to limit its effects. With a system as complex as the global climate system, with so many subsystems and inputs, determining the exact effects of global warming will be as difficult as predicting the possible consequences. However, the precautionary principle suggests that we should endeavor to behave as though the worst-case scenario were the most plausible while we work to ascertain the exact nature of the situation. Eco-optimists generally tend to recommend just the opposite, suggesting that we continue with business as usual, quite literally, until we know with absolute certainty to what extent human activity is affecting the global climate. Unfortunately by then, it may be too late.

Although there is no single definition, the precautionary principle is exactly what it sounds like. It is the notion that when information is limited and future consequences are not clearly predictable, we should prudently proceed with caution when implementing a new social plan or technology. As Sheldon Rampton and John Stauber explain, "The reason that scientific uncertainty is the fulcrum for the precautionary principle is that the harm associated with technological innovations is often impossible to prove at the time the new technology is introduced."⁵³

When you are driving down a country road at night, you naturally use the precautionary principle. Your vision is limited and you are aware that the road can suddenly change, or that animals can leap out at you from the trees, so you moderate your speed. This is not the principle we use when implementing new technologies, but it should be. When it comes to new technologies we assume they are innocent until proven guilty. This isn't caution; this is blind optimism.

Eco-optimists and industrial advocates often complain that the precautionary principle would stifle economic growth and hinder innovation, leading to a decline in the progress that humanity has been experiencing for the last century. Can the precautionary principle be abused? Certainly. But blind faith in technology is also an abuse. It is an abuse of the scientific principles that lead to it.

Science is based on hypothesis and experimentation. If we don't know what the likely effects of a new technology are, then we should proceed slowly with its implementation, using research and experimentation to guide us, particularly if that technology affects or creates a complex system. As complex systems are notoriously unpredictable, they pose greater potential dangers in the long run, even when short-term consequences seem small. Global climate is a perfect example of this.

How do the various aspects of the physiosphere interact with humans on the personal, cultural, and social levels? How do we personally experience the changes to the physiosphere that we are engineering? Part of the answer to that question will depend on who you are. Do you live in a developed country or in a developing nation? Do you live in the city or in the country? Do you live in a coastal region that might experience flooding? Are you a farmer whose crops might be susceptible to severe changes in weather patterns? Are you light-skinned and more susceptible to

skin cancer from increased ultraviolet radiation due to ozone depletion? Do you have enough wealth to separate you from the worst of the pollution, or are you so poor that polluting companies can dump their waste in your communities? Does your government support laws to protect natural resources and prevent irreparable damage to the environment? All people will have a different experience of the world around them and this will be mitigated by the culture they inhabit and the social structures in place around them.

Experience will play a large part in determining the way we feel about the changes in the physiosphere and our use of Earth's natural resources. For the average American, we see so many benefits from doing things the way we do that the advantages of the particular path we are on seems to fully justify the risks, dangers, and problems it causes. For others in the world, this isn't so apparent. Global warming is a perfect illustration of a threat that our brains aren't really designed to deal with well. It's a nebulous danger whose worst consequences seem to be decades away. Emotionally, it isn't the sort of subject that raises our immediate concern the way a burning building does. And the recommended courses of action to combat it requires significant personal, social, and cultural changes.

Eco-optimists frequently state that the economic cost of combating global warming would destroy our free market economy. This pessimistic prognostication flies in the face of what we know about the complex system that is our global economy. One of the things that has repeatedly proven to stimulate economic growth is widespread investment in new technologies. One need only look at the worldwide economic boom in the late 1990s. Originating from US government research, vast infusions of private investor cash expanded a nascent Internet into by into a burgeoning worldwide Internet industry. A similar widespread investment, public and private, in alternate energy technology might affect our national and global economies in a similar fashion.

This investment in new energy technology is essential to stave off the worst case effects of global warming, as well as the reduction in air quality, created by our existing electricity generation systems. Currently, 39 percent of the energy in US comes from coal, while 27 percent comes natural gas, 19 percent from nuclear power, 7 percent from hydro power, 1 percent from oil, and 6 percent from an assortment of renewable energy sources such as wind and solar.⁵⁴ Most experts believe that shifting the balance of our energy sources away from those that create GHG to those that do not pollute the environment will take several decades, even with a concerted effort to do so. And doing so will require new technology. Whether that takes the form of a new generation of safer pebble-reactor nuclear power plants (that would still leave behind deadly radioactive waste), or carbon-capture-and-sequestration technology that would clean and capture coal exhaust and bury it deep in the Earth (where we have no idea how it would react geologically), or the expanded use of solar energy to eliminate the need for a rural power grids (which would be less useful in expanding urban areas), to building more wind mills (assuming the locals don't invoke NIMBY zoning laws to preserve the views of their landscapes and oceans).

Not surprisingly, the breadth of our worldview informs our emotional and intellectual responses to a subject like global warming and the possible technological solutions to alleviate it. It also informs how we will personally act in the face of such a problem. If we can imagine a different personal response, can we then imagine different cultural responses and different social structures? The elements that make up the physiosphere are resources, but how we see and use them depends not only on their nature but also upon our own. We are learning, through events like the depletion of the ozone layer and global warming, to see that the way we use the resources of the planet will determine what sort of planet we live on. It's not merely our personal lives that change, or our cultures and societies, but the physical world we all inhabit.

Contemplation of the Physical World

What is your relationship with the physical world? How does the physical world impact your life? How does the way you live your life impact the physical world? Look around you. What things from the physical world have made their ways into your life? Everything made of glass, brick, stone, steel, aluminum, or plastic was at one time part of the Earth. How did the processes of changing these materials into your house or car or TV change the world? How do you think that the pollution from our human world is affecting the physical world we live in?

How do you contribute to pollution of the physical world? Do you think you should change your behavior in any way to reduce the pollution you create? How do you think you could do this? Do you believe that global warming is occurring? If so, what is your understanding based on? If not, why do think it is not happening? How you feel your worldview informs your appraisal of such things as pollution and global warming?

When you think about the physical world, what occurs to you? How do you envision your interaction with it? Do you live in a city, or do you live in a place that allows you direct contact with aspects of the physical world? Do you live near the ocean or a large body of water? Do you live near a geologically-active area? Do you think of the weather as part of the physical world? Have you noticed changes in these aspects of the physical world over the course of your lifetime? How do you respond to these changes?

How do you think the physical world affects you personally? How does it affect your family, your community, and your country? How do you think that you affect the physical world as opposed to other people in the world? Do you think your family affects the world differently than other families in the world? What about your country? How do you think the physical world and the way you and others relate to it affect your culture? How would you imagine it affecting other cultures in different parts of the world? How does the geography of your country relate to its culture and to the society you live in? How does the weather of your region affect your society and culture? How do these things affect the way your country relates to others nearby and far away? How do you think your worldview colors your perception of these things? Can you imagine how people with different worldviews might respond to these questions?

Action: Set aside a special period of time to do nothing for an hour but examine and contemplate some aspect of the physical world. If you live near an ocean you might spend some time on the beach contemplating how the world's oceans affect the global weather patterns. You can also spend some time reading up on your excursion beforehand. Maybe there is a mining operation near you that you can visit to see how resources are removed from the Earth. Take some time and think about how you can better experience the physical world and then take some time to do so.

The Natural World

The experience of awe one feels standing beneath the star-filled heavens is by no means unusual, though it is becoming more rare as the world's population continues to move into urban areas where city lights blot out the glorious firmament above. A sense of wonder in the presence of an infinite number of stars is no doubt what inspired the ancient Neolithic sky watchers who built Stonehenge, and the court astronomers of the Sumerian, Babylonian, Egyptian, and Mayan civilizations. Gazing at the stars, the ancients created numerous stories to explain the existence of the universe.

Egyptian myths tell of an original creator Ra-Atum, who manifested from primeval chaos and spawned the first essence of the male and female in Shu, the god of air, and Tefenet, the goddess of moisture. Shu and Tefenet soon gave birth to Geb and Nut, who embraced so tightly that when Nut became pregnant, there was no room for anything to be born. Shu separated his incestuous children so that there could be life, with Geb becoming god of the Earth and Nut, goddess of the sky.

The theme of separation courses throughout human history. Just as myths of creation separate us from the Divine, the birth of civilization served to separate us, for the first time, from nature. As we gathered into larger and larger settlements, we moved further away from the reality of the Earth. From initial settlements like Catal Huyuk in what became modern-day Turkey, to the rise of city-states such as Sumer and Babylon, humans drew further from nature. These were the first cuts along the cord connecting us to our primal selves, and this separation brought incredible changes.

Cities demanded bureaucracy, which in turn required a means of record-keeping. In short order, spoken language transformed into writing, and for the first time our interior thoughts could be transmitted and preserved. The human love affair with the written word flowered, engendering what would eventually become a full-fledged retreat from the world of places and things into the ephemeral land of ideas and concepts that constitute our minds. And while civilizations continued to rise and fall for four thousand years, through the grace of, and often in spite of the written word, it was not until the Italian Renaissance of the 1500s that the most significant separation from nature occurred.

Though mythology and civilization had divided humanity from the Divine and nature, science soon began to sever the ties between the universe and the Divine. The universe in all of its mysterious glory had always, in nearly every religion, been considered divine. All this began to change as the Renaissance of Western Europe bloomed into the Enlightenment. Again, written language was a large part of the separation. Johannes Gutenberg's invention of a movable type printing press around 1440 revolutionized the transmission of information throughout the continent. Books no longer needed to be copied by hand but could be produced with minimal effort and expense.

One of the first men to take advantage of this new technology was Polish astronomer Nicolaus Copernicus. In 1543, he published his infamous *On the Revolution of Heavenly Bodies* in which he proposed a heliocentric theory of the solar system. Ignoring the pre-scientific supposition of Ptolemy and Aristotle, Copernicus relied on empirical observation to determine that the planets of the solar system revolved around the sun, not the other way around, as many Greek philosophers had reasoned.

The dispute between science and religion took its most dramatic turn with Italian priest and philosopher Giordano Bruno. His publication of *On the Infinite Universe and Worlds* in 1584 made him few friends within the Catholic Church. The irony is that Bruno believed the universe is Divine. However, his insistence on its infinite nature and his ideas about sensory evidence being given more credence than scriptural writing put him at odds with the leaders of the Church. After seven years of inquisition, he was burned at the stake in 1600, becoming an instant martyr for the cause of rationality over superstition.

Well aware of Copernicus' ideas when he built one of the first telescopes, Italian mathematician Galileo Galilei published confirmations of the heliocentric theory in 1610. By 1616, writings about the heliocentric theory were banned by Church edict, and Galileo faced the Inquisition. Not wanting to follow in Bruno's fiery footsteps, Galileo wisely recanted his most controversial ideas and was allowed to remain under house arrest until his death. Two years later, in 1618, Johannes Kepler, a German astronomer, began publication of his mathematical confirmations of the Copernican theory. Basing his calculations on the studied observations of his mentor, Danish astronomer Tycho Brahe, Kepler succeeded in showing that the planets did not move in circular orbits as Aristotle had deemed necessary, but instead revolved around the sun in an elliptical fashion.

Meanwhile, in England, the philosopher Francis Bacon was developing his ideas about the nature of science. In 1620, he published his *Novum Organum* in which he declared that science, and thus knowledge about the universe, should be based on strict observation and careful experimentation. Reacting to the tendency to displace scientific inquiry for religious dogma, Bacon wrote, "Thus it happens that human knowledge, as we have it, is a mere medley and ill-digested mass, made up of much credulity and much accident..."⁵⁵

In 1637, French philosopher René Descartes provided Bacon's vision of science with the perfect metaphor. Speaking of the human body, Descartes said, "I assume that the body is nothing less than a statue or machine of clay..."⁵⁶ In fact, Descartes envisioned the entire universe as a giant mechanism, and each of its living and non-living inhabitants as finely tuned mechanical devices that could be understood by understanding their parts.

Some 50 years passed before the mathematician, Sir Isaac Newton, discovered how certain parts of the universe interacted with each other. The co-creator of calculus, (along with the German mathematician and philosopher Gottfried Wilhelm Leibniz — the man who coined the phrase *perennial philosophy*), Newton used Kepler's mathematical and observational proofs of the elliptical orbits of the planets to formulate his laws of gravity and motion. Newton showed that not only could the universe be comprehended, but more importantly, that events within it could be predicted with accuracy.

Against this onslaught of rationality, the Western churches, Orthodox, Roman Catholic, and Protestant alike, could no longer hold their privileged positions as interpreters of the cosmos. Copernicus, Galileo and Newton led a revolution (fueled by Guttenberg's printing press), that would, within the relatively short span of 400 years, completely divest the universe of divinity, creating a Cartesian cosmos envisioned as a splendid machine, not quite infinite, but quite certainly knowable. Thenceforth religion would only be allowed to discuss what could *not* be seen, while the whole of the visible universe would become the empirical domain of science.

Science, of course, has little concern for that which cannot be seen, or at least theoretically supposed with enough mathematical imagination. Though all of the men of science aforementioned believed in a divine God (with the exception of Bruno), they did not see the possibility of, nor the need for, a divine universe. Not surprisingly, in the course of the centuries

that followed, scientists and philosophers managed to erase even the need for a God, a divine force, a cosmic creator. God, the cosmos, humanity, and the very idea of divinity had all been dismantled and compartmentalized.

This brief history is not intended to imply a denigration of science or a denial of its contribution to human civilization. It is not that the reductive Cartesian/Newtonian paradigm is incorrect, as some New Age pseudo-sages would have us believe, but that it is incomplete. The mind-body organism is not a machine; it is a vastly complex system of intricately interdependent subsystems all functioning in relative harmony. A holistic science, still empirical and evidence based, will examine both how individual holons function as well as how entire systems behave.⁵⁷ However, regardless of the scientific principles we use to understand the universe, science has nothing to say about some the most important aspects of human existence.

Science can tell you about hormones and pheromones and explain the nuances of the maternal instinct, but it cannot quantify love. It can explain the birth of the cosmos, exploding forth from an unimaginably non-existent point known as a singularity, but it can't give meaning to that birth. Nor can it give meaning to the evolution of the human species, from a single-celled organism in the primordial soup of Earth's long distant past, to a race of beings that is haphazardly changing the very language in which that evolution is written.

From Copernicus' notion that the planets revolve around the Sun to Darwin's insight into our intimate relation to all life, from the wonders of Quantum physics unfolding in the integrated circuit and the nightmare of nuclear release to the Frankenstein-like exploitation of the planet's genetic treasures, science and its doppelganger, technology, have changed not only the way we think about the universe around us but the universe within us as well — separating one from the other.

Separation is a necessary aspect of growth in any living system. However, a healthy separation does not attempt to deny that the previous connections ever existed. This is why all of the world's great religious traditions contain a path that acknowledges humanity's union with the Divine. The mystic paths of Sufism, Kabbalah, Advaita Vedanta, Buddhism, and Christian Mysticism are attempts to foster a reunion with the Divine. On the other hand, science, particularly in its current corporate-directed incarnation, possesses no yoga of communion with the Divine. Science has shown us that the universe has no need of a divine creator to exist, but it has nothing to say about the actual divinity of the universe itself.

In contrast, devoted practitioners of spiritual paths learn to apprehend directly the divinity of all things, and that the separation of them, which at first seemed so useful, is, in fact, an illusion. A classic example of this is found in the Hindu *Chandogya Upanishad*, which tells the story of a young man, Svetaketu, who returns home from years of schooling convinced that his knowledge of the world is superior to his father's. His father soon shows him that, while he sees the parts of the world, he does not see its indivisibility. Repeatedly making Svetaketu experience different parts of his world, he chides his son with the refrain, "That is the True, that is the Self, and thou, Svetaketu, art That."⁵⁸

An excellent examination of the separation between nature and humanity and the problems between the Traditional and Modern worldviews can be found in the animated film *Princess Mononoke*. In the film, the forest spirit, a creature of divine power that gives life to the animals and plants of the forest, is threatened by the modern science and industrial designs of Iron Town. The leaders of Iron Town see nature as an obstacle to progress and something that can be discarded. Only the young hero has the ability to see the necessity for both and the ability to unite them in an Integral vision. The film is a powerful commentary on the current trajectory of our worldwide

clashes between nature and science, Traditional and Modern worldviews, spirituality and secularism, and the need for an Integral vision to see beyond the illusion of their separation and unite them all.

The damage to the natural world that we humans are creating is something that few of us seem to think about on a regular basis, and even fewer of us seem to notice directly. This is in part because these processes, these changes, occur over an extended period of time. A species doesn't normally become extinct overnight. It takes years. And as our brains tend to think in short-term threats, the threat from the degradation of the natural world doesn't register as easily as the threat from being hit by a car.

The other reason we personally find it difficult to get a full grasp on the ecological state of the world is that most of us are completely separated from it. The majority of people in developed nations (where most of the ecological change finds its source, if not its effect) live in urban and suburban areas distinctly removed from the natural world. Our relationship with nature has been severed. Our idea of nature is a community park, or a box of flowers on the fire escape. Even those who still live in nature, in the rural areas, have become more disconnected from it. We have turned our homes into little electronic fortresses, blocking out the natural world outside the door and turning inward to TV, the Internet, and central air-conditioning.

We in the Western world have created cultures that see nature not as a mesh of life enfolding us and supporting us but as a distant "thing" that is pleasant to visit but not seen as a part of "modern life." We see nature on the TV and maybe use the Web to plan a vacation someplace where they have a spa, but we don't actually experience nature as a part of our existence. We don't see ourselves as a part of nature and the processes of the natural world. This makes it easier for us to see our actions that are deleterious to the biosphere as something set aside from it. We don't see the connections between our actions as individuals, as communities, and as nations, with the effects of these actions on the environment.

We have not only become disconnected from nature but from our own lives. And we bring this disconnection into the very structures we create to live in. Our cities are designed to enhance the separation between urban and rural, between humans and nature. Suburban sprawl is a poor compromise between urban life and rural contact with nature. It only encourages the very structures of society that help to create that separation. Sprawl requires more cars, and more cars require more freeways, and more freeways create more sprawl. Look at Los Angeles and its surrounding counties and you can see the separation from nature just as easily as walking down Fifth Avenue in Manhattan.

This separation from nature, this disconnect between our actions and their ultimate consequences weighs heavily on the life systems of the planet. Environmentalists worry this damage may be irreparable, permanently destroying vast and important aspects of the nature world. Eco-optimists believe that the natural world, while important, is not as important as human progress, and that we can adjust to any changes we might create.

Both of these views miss a central point — the planetary Gaian system, will survive, whether or not we do. It has survived at least five extinction level events in the past four billion years, and it will eventually recover from whatever we throw at it. The question is whether we will survive with its recovery.

The natural world, the biosphere, the world of life, of living organisms and systems, is dependent upon and lives in interrelationship with the physiosphere. The idea that the processes and complex systems of the physiosphere and the biosphere work in symbiosis as a single complex system, much like cells and systems of a living organism, is called the Gaia Theory.⁵⁹ The ideas

behind this theory are fairly straightforward. We know that Earth contains a large number of individual ecosystems that strive to remain in balance between their living systems and the physical systems of the environment they occupy. Thus the bacteria, insects, plants, and animals that inhabit a marsh will tend to coexist in a fashion that allows all of them the maximum chances for survival. The wastes of one species will become the food for another, and all will attempt to respond in balance with the physical constraints of that particular environment. This pattern of interrelationship is called an ecosystem.⁶⁰

The term *ecosystem* was coined by British ecologist Sir Arthur George Tansley in 1935 to describe the continual interchange between living and non-living parts of natural systems. The Gaia theory simply takes this long-proven science of interdependency and applies it to the entire planet. It suggests that all of the planet's systems, living and non-living, exist and evolve in mutual interdependency. Thus changes in some aspect of this system, particularly those that destabilize it, will result in fluctuations, or system changes, that will attempt to restore balance to the system. Currently 10,000 species are going extinct every year, which is estimated to be at least 1000 times the natural extinction rate and we are presently cutting down enough forests to fully cover the country of Panama each year. More than half of the world's fisheries are harvested to capacity and nearly a third are fished beyond sustainability. Our levels of externalized pollution contributes to the deaths of nearly 100 million people each year, some 5000 dying each day from the lack of clean drinking water. Rampant species loss, unchecked deforestation, depletion of world fishing stocks, and increasing levels of pollution are only some of the ways humans are impacting the natural world and destabilizing the global Gaian system.⁶¹

As scientist Elisabet Sahtouris writes, we must realize that "...the Gaian life system has evolved in such a way that it takes care of itself as a whole, and that we humans are only one part of it. Gaia goes on living, that is, while here various species come and go. We used to believe that we were put here to do whatever we wanted to with our planet, that we were in charge. Now we see that we are natural creatures which evolved inside a great life system. Whatever we do that is not good for life, the rest of the system will try to undo or balance in anyway it can. That is why we must learn Gaia's dance and follow its rhythms and harmonies in our own lives."⁶²

To learn this dance we will have to rediscover our intimate connection with the natural world. This will take more than a hiking trip or a vacation of camping. It will require even more than growing up surrounded by nature, as I was fortunate enough to do. It will require that we change the way we look at the world, and the way that we live in it, as part of it.

Contemplation of the Natural World

What is your relationship with the natural world? When you think about nature, what comes to mind? Do you live in a place that allows you daily contact with nature? Do you live someplace where you have little or no contact with nature? How do you think where you live affects the way you relate to the natural world? How do you think the natural world supports your life?

What do you encounter in your daily life that finds its source in the natural world? Everything you eat and much of what you use have their origins in the natural world. How often are you aware of this? The processes we use to make many items pollute the natural world. How much of this pollution are you aware of? How much of it do you contribute to? How does the way you live your life pollute nature? How do you feel about this?

How do you think your worldview informs the way you react to pollution of the natural world? How do you think you could change the way you live your life to reduce and eliminate pollution?

How do you think the country you live in contributes to pollution of the natural world? How do you feel about this? Do you think there are things your country could do to reduce its pollution?

In general, what do you think about nature? Does it strike you as some resource we should conserve for our enjoyment? Does it seem more like a resource that should be used for our benefit? Do you see nature as a web of life supporting human society? Do you see nature as sacred? How do you think your worldview informs the way you perceive the natural world? Do you think the amount of time you spend in nature impacts on the way you perceive it? Would you like to spend more time interacting with the natural world? Why or why not?

How do you feel that your relationship with the natural world differs from the people you know? How do you think your family impacts the natural world? How does it affect the lives of your family? What about your community or your country? Do you think that your community has a different relationship with nature than others? In what way? Would you say that one is healthier than another? What about your country? How does your country seem to relate to nature and how does this compare with other countries?

How does the relationship between nature and your country affect your culture? How does your culture impact the natural world? Does your culture encourage massive consumption of goods from the natural world? Does your culture condone pollution of nature? How does your country compare to others in this respect? What about your society? How are the social structures of your community and your country shaped by their relationships to the natural world? How does your society impact the natural world? Are there ways you would like to change the manner in which your culture and society interact with the natural world? What are these ways? How do you think your worldview informs the opinions you have about the natural world? How do you think your own experience with the natural world informs your opinions?

Action: Take a day — or more if you can afford the time — and specifically spend some time interacting with nature. If you happen to live on a farm, this isn't really something you need to practice, but if you live in a city, you might find a great deal of benefit from working on a farm, if only for a weekend. This interaction can take the form of a camping or hiking trip, or it can be a weekend meditation retreat in the mountains. The idea is to take the time not to distract yourself from where you are by some sort of directed action, but to immerse yourself in the presence of nature. Try to stay mindful of the way that the natural world supports all of human life and how humanity is part of the natural world. Spending some time in nature, particularly near a city, will inevitably reveal some level of pollution. Take some time to think about this and what effect it has on nature, and then eventually, you and the rest of the world.

The Human World

I live in Brooklyn, New York, just across the East River from Lower Manhattan. I remember waking up on September 11, 2001, to find the city under a terrorist attack, the Twin Towers burning. I felt horrified at the deaths of those who perished just across the river from where I live and write. However, I realized something while standing on my roof, watching the smoke fill the sky where before there had been two enormous towers reaching far above the Manhattan skyline — I realized that my visceral reaction to that tragedy, while natural, empathetic, and compassionate, was incomplete.

It was incomplete because it was directed only at those who had died or were wounded in the attack. Because it had happened all at once, and so near my door, my heart and mind opened themselves fully to the anguish of those who were suffering. I experienced a sense of connection that I had never encountered when contemplating those who are suffering every day throughout the world. Thousands died that day as the result of violent actions taken against them. And thousands died today from violence as well, in this country and in many others. And thousands will die tomorrow, and the next day, and the next, and millions who do not die will suffer beyond our imagination. And because it is beyond our imagination, because we do not see it every day, on every news station, broadcast 24 hours straight with no commercials. We will not connect with it in the same way we connect with a tragedy like the attacks on New York City.

However, for us to understand the world, for us to have any hope of creating a better world, one where people do not suffer by the millions each day, or die due to war, disease, and hunger, then we must learn to envision it as it is, to see it in all its horrible nature. We need to deepen our view of the world until we feel as much sympathy and compassion for every person who suffers throughout the world as we do for our own suffering.

It is because we do not contemplate this suffering, do not open ourselves to this reality, that we can tolerate it. No one is willing to tolerate extraordinary suffering so close to their own lives, but the further it is removed from us, the easier it becomes to accept. Thousands of Americans rushed to donate blood in the wake of the attack in New York on September 11th. How many donated blood to help the 2.5 million people who died in Zaire (the misnamed Democratic Republic of Congo) the year before? Thousands generously volunteered time and money to help the victims of Hurricane Katrina in 2005. How many will shed tears for the 21,000 children who die in poverty each day? That's over 800 children an hour, suffering through no fault of their own. Or what about the 30 million people throughout the world that are living in slavery in the 21st century? How often do we say prayers for them? How much of our government's resources do we ask be contributed to obtaining their freedom? What about the more than 1 billion people who are malnourished, who go without adequate food and water each day? How can we imagine their suffering?⁶³

I asked this question of myself, standing on the roof that day, looking at the devastation of New York City. I could hardly contemplate the deaths of a few thousand people. How could I begin to imagine suffering on a scale as vast as the whole of the world? As I wiped away the dust from the collapse of the buildings that had blown across the river, I realized the answer — slowly. We need to train in contemplating the world and all its suffering. And by contemplating it, we will be driven to action. We will not be able to accept a world where millions die of preventable diseases or where children, even in rich countries, die because of inadequate healthcare. We will not be able to accept the extraordinary gaps in wealth and suffering between peoples and nations.

Some 1.6 billion people, nearly a quarter of the world's population, have no access to electricity in the 21st century. Nearly 80 percent of the seven billion people living on this planet live on less than \$10 a day. Of that number, 2.6 billion people in the world live on less than a \$2 a day. That is more than a third of the world's population. For comparison, in the US, with less than 5 percent of the world's population, we enjoy an average income of \$138 a day. Of course, some enjoy much more than that. Fewer than 500 of the wealthiest people in the world control \$3.5 trillion in assets, and only 85 of them control as much wealth as half of the world's population, some 3.5 billion human beings.⁶⁴

This is a staggering contrast. And while some will say that's simply the luck of the draw, or the way the system works, surely we can create a world that doesn't rely so much on luck, or one that tries to understand and eliminate the suffering within the system. Some 500 people have more wealth than they could ever use and over a billion live in abject poverty. Imagine, if you can, everyone you know, everyone in the US and Canada and all of Europe scrounging on less than a \$1 a day while in a small town in South America with a population of 500 lived in luxury and everyone was a billionaire. Imagine that some of these people enjoyed so much wealth that they could afford to give every person on the planet a \$10 check and still have billions left to live on. How can we look at such a world, such a system, and think that it is fair and just? The answer is the same one I have for so many things — worldview. If we saw every starving child in the world as our own child, every dying woman and man as ourselves, we would not be able to passively sit by and watch their pain. We would gladly change our lives to save theirs.

Part of the problem of inequality relates to the size of the human population. As of 2014, there are over 7 billion people on the planet. The United Nations median estimates for 2025 suggest a world population of approximately 8.3 billion people and 9.6 billion people by 2050.⁶⁵ These of course are estimates. Prediction of population growth is complicated. As Nicholas Eberstadt writes, "The inescapable truth of the matter is this: We have no way of accurately predicting long-term fertility trends in advance. For better or worse, the social sciences lack any reliable basis for forecasting fertility change before it occurs — or even for explaining its precise determination after the fact."⁶⁶

There is some good news, however. The UN seems fairly certain that by the middle of the next century, the world population will stabilize. It has already begun to stabilize or drop in many developed countries. The population replacement birthrate is estimated to be 2.1 children per woman over her lifetime. Many developed countries are well below this, and there are several developing countries where this index has dropped precipitously as well. It is also important to note that the increase in world population we continue to experience is due to the increased lifespan of most humans, rather than increased birth rates. Even in the face of this good news, countries like China and India will continue to add 10 million and 15 million people a year to the planet, respectively.

Women, of course, are the key to all this. When women do not have access to child planning and reproductive choices, the result is greater populations. When women have greater socioeconomic standing in a society, and thus more reproductive choices, the fertility rate of a society drops. Only by ensuring that all women have access to education, social and cultural power, and reproductive choices, can we begin to cope with the world fertility rates.

This increase of people to house and clothe and feed will drastically affect us all. The number of people who are hungry now is unimaginable. And what is more unimaginable is that they are hungry not because the world can't feed them, but because our global social structures are organized in ways that don't allow it.

Today, we produce enough food for each person on the planet to eat a diet of 3500 calories a day. Considering that most adults only need between 2000 and 2500 calories a day, we are growing enough food for a fattening world diet. But that food never makes it to the 800 million people who are starving from hunger. The way we have constructed the world's distribution of food and resources doesn't allow it. For instance, we in the West eat an extraordinary amount of meat. The grain that could be feeding people is feeding cows so that we can have beef at every meal.

Even if we can manage to change our lifestyles and social structures so that everyone can enjoy the bounty of Earth, adding more people to our planet is going to create significant problems. Food is one. The pesticide and artificial fertilizer-driven agricultural "green revolution" is running up against some serious walls because of the pollution to water and soil it generates. Everywhere, we are building things on land that was once farmland. The promise of the biotechnology industry to save us all with more productive foods that have been genetically engineered has a hollow ring. And food isn't the only problem.

The more people you have, the more struggle there can be for access to resources like clean water. Jobs are also an important part of the population problem. In the past, economists saw a rising population as an economic plus. How can that still be true in a world where the rapid advances in technology mean that fewer and fewer people will be required to produce more and more goods? Right now there is a boom of cheap labor around the world. What becomes of this labor when robotic technology makes human labor obsolete? And what about 3D printing and nanotechnology? What effect might they have on labor around the world? Most frightening of all, the countries that are so poorly prepared to deal with high populations today will be exactly the ones whose populations will increase the most. They will not be able to deal with these problems without help. The whole world is going to need to make a concerted effort to reduce population growth. Unfortunately, such an effort has only barely begun.

None of these concerns are particularly new. The Club of Rome's *The Limits to Growth* published in 1972, made many of the same points. In their final commentary to the book, the editors wrote, "It is only now that, having begun to understand something of the interactions between demographic growth and economic growth, and having reached unprecedented levels in both, man is forced to take account of the limited dimensions of his planet and the ceilings to his presence and activity on it. For the first time, it has become vital to inquire to the cost of unrestricted material growth and to consider alternatives to its continuation."⁶⁷

However, as many critics and eco-optimists point out, most of the dire predictions from the book have not come to pass. This does not mean that they are impossible. The main flaw with the book was that, in an attempt to make long-term projections about population and industrial growth, they used mathematical models that turned out to be inaccurate. For instance, they assumed decreasing availability of resources but failed to see that industrialization would create more efficient resource extraction and manufacturing techniques. However, there are physical limits to most of our industrialization processes. You can only reduce the amount of material used to manufacture an item by only so much. Once you have achieved this, you come up against a wall of diminishing returns.

The same applies to mineral extraction from the earth's crust. While new techniques of mining the ocean floors or hauling asteroids to near-earth orbit may expand our access to raw minerals like iron, copper, silver, or gold, these methods will undoubtedly be expensive and have potential environment consequences. This is not to say that industry should not constantly be trying to explore new access to raw materials or increase the efficiency of its manufacturing processes to utilize fewer resources. The point is that both our industrial and our economic growth and

development need to be seen in the context of the whole system of the physical, natural, and human worlds, wisely balancing the needs of them all.

The same is true for agriculture. The “green revolution” has dramatically increased the amount of food available, thus helping people live longer lives, and, ironically, increasing the world population, thus putting more strain on the system to produce even more food. But, as with industrial manufacturing processes, there is an upper limit to how much food a given plot of land can produce. Eco-optimists will counter that the whole benefit of global trading is that countries which are unable to produce enough food to sustain their populations can trade other goods and services to obtain the capital necessary to purchase their dietary needs. This comparative advantage dynamic can be economically beneficial for developing countries. However, it leaves the potential for rapidly changing political, social, and economic conditions throughout the world to create situations where a poor country that relies on trading for its food ends up starving when it finds that the global market no longer values its wares.

Unfortunately, we have created a system of resource distribution that our planet cannot sustain nor significantly expand to encompass the entire population of the world. More unfortunate is the fact that this is the best system we’ve been able to envision in the past 5000 years. We must begin to examine the social, cultural, technological, economic, and political systems with which we govern our world from an Integral perspective. Failing to do so will only allow glaring problems to become painful disasters.

For instance, in the US and Europe, some 10 percent of the world’s population accounts for nearly 60 percent of world economic consumption of goods and materials. We Westerners live a good life, and we don’t much seem to notice that others do not and cannot with the current world economic system. The difficult thing for many of us in the West to admit is that we need to expand our worldviews to see how we may contribute to the suffering in the rest of the world even as we help others around the world change their worldviews to see the suffering they engender.

Once we have managed this Herculean task of deepening our worldwide collective worldview, we then need to begin the even more difficult task of transforming the world to express it. We must cherish all human beings everywhere and see their suffering as directly related to our own. Indeed, we must eventually go further still and see their suffering as our suffering, and we must be brave enough to help them, and ourselves. To do this, we will have to transform not only the world outside, but the world within each of our hearts.

Contemplation of the Human World

How do you envision your relationship with the rest of humanity? Can you even envision how many people are on the planet? Do the billions and billions of people around the world seem distant to you? How do you feel that your life is related to theirs? Do you use anything made in another country — your clothes, your food, your car, your appliances? Do you think that events taking place in other parts of the world eventually affect your life? How so?

When you think about the billions of people around the world who are living in poverty, how do you feel? What is your reaction to the millions of children living in war-torn countries and being forced to fight in battles against their wills? When you think about people around the world not having access to clean water, what is your response? When you read estimates that world population is increasing, what does this make you think? When you contemplate the number of people dying from preventable diseases, how do you feel? What comes to your mind when you hear about the millions of people around the world suffering from AIDS? How do you think your worldview informs the way to respond to these things?

What is the relationship between the rest of the human population and your family? How do the events in the human world affect your family? How does your family affect other families throughout your nation and the world? How does your community affect and interact with other communities? How does your country interact with other nations? What do you think the nature of these relationships is? How do you think your culture affects the way you and your nation interact with the world? Do you think it helps to create a positive interaction? How do you think the structures of your society affect the way your nation interacts with the rest of the world? How do you think your culture and society help shape your opinions and interactions with the rest of the planet?

How do you think the human world interacts with the natural and physical worlds? How do you think your worldview shapes the way you think about and interact with the rest of the human world? Are there ways in which you would like to change your behavior in relationship to the rest of the human population? Are there ways that you would like your community or nation to change in relation to the human world? What are these ways, and what keeps you from engaging in them, or encouraging others to do so?

Action: It is impossible for most of us to travel the world. But it is possible for us to read and learn about other parts of the world. As a small project, chose two countries in the world to research; one developed nation and one developing nation. Allow yourself plenty of time, several weeks or months if necessary, and try to learn as much as you can about these two countries. Start with encyclopedia articles and maps. Then find some books on these countries and read as much as you can about them. Follow current articles in the newspapers and magazines. Search for websites devoted to these countries or their citizens. While doing this research, try to learn as much as you can about the people of these nations. Maybe you could see films from them, or read translated books. Possibly, if your funds allow, you might even wish to travel to them, or learn their languages. While engaging in this slow process of research, take the time to compare and contrast the way the people in these countries live with your own. Compare them to other countries you are familiar with, as well. Try to discern the central reasons for the differences, and which ones are related to culture, or social structures, or worldviews.

Cultural Fusion

Culture lives in the collective minds and artifacts of a people, in the Noosphere, or world of the mind. As the intertwining of economies and societies of the world continues, various cultures become exposed to each other and react to that exposure. Although cultural fusion, the blending in small or large part of customs and systems of behavior between two or more cultures, is nothing new; the way it is playing out in our hyper-globalizing world is. Cultures that have had little interaction with others are now being bombarded by ideas, customs, and systems of behavior that can be disrupting to their social fabric. This disruption can be both a good and a bad thing.

For instance, societies that previously gave little or no value to the social standing and liberty of women are being forced to confront this patriarchal cultural element and, in many cases, revise it. This kind of cultural tinkering can cause great upheaval in a society and can result in the emergence of fundamentalist movements that desire a return to the pure, unchanged customs of that culture. Additionally, cultural fusion can result in the decimation of cultural customs that are extremely healthy for a society and help to bind it together. This can be seen in Thailand, for instance, with the loss of spiritual training for its young men in favor of the immediate pursuit of material rather than spiritual wealth.

Cultures do not simply arise out of thin air. They are products of their society's circumstances and are influenced by a host of factors that contribute to their eventual composition. These factors range from geography, climate and the local ecosystems, to social structures, racial and ethnic diversity, and religion. In the past, cultures developed and changed in relative isolation to one another. Today, they are influenced not merely by the characteristics of their cultural environment, or their interaction with other cultures, but their interactions with the whole of the physical, biological, and mental worlds.

Globalization means that a country is no longer defined only by its ecosystem, but by the ecosystems of all the countries it trades with. It is no longer constrained fully by its geography, because in many ways it can transcend its geography. Its religion is not necessarily its bedrock, because there are a number of other religions available to its citizens. The ideas and ideologies that shape its customs can be challenged by those flowing over the Internet and other global media. And its art now competes in a larger pool of words, songs, and images from around the world. The observers of cultural fusion tend to see two trends emerging from this situation, and they appear very much related.

The first trend is what is generally called monoculture. This criticism holds that Western countries, primarily the United States, have such powerful tools of cultural dissemination (such as TV, films, and the economic forces of transnational corporations) that they are squashing and destroying local cultures around the world, replacing them with a glossy, exported culture from America™. The second trend suggests that many cultures are defending themselves against this flood of corporatized Western culture in reactionary ways that create and support religious fundamentalism and hyper-nationalism.

Viewed as a clash of worldviews, these two perspectives of cultural fusion make a little more sense. Western corporate culture is the expression of the Modern worldview that seeks to replace Traditionalism wherever it is found. Fundamentalism and nationalism are attempts by Traditionals to retain or regain the primacy of their social status. The same conflicts between worldviews that are played out in the United States are also played out around the world. Many individuals in Traditional cultures readily flock to the cultural ideals of the Modern culture machine because it

offers things they desire. The Modern ideals of individual rights, human rights, equality between men and women, equality between races and ethnicities, and religious freedom are things people in all cultures can find appealing.

However, as mentioned earlier, these ideals upset the cultural and social power structures that Traditionals rely on. This disruption is not assisted by the fact that the Modern worldview tends to disregard or marginalize all the customs of Traditional cultures, even those that an Integral worldview would value. For instance, a Traditional worldview might value a connection with the land and see parts of the Earth's natural resources as sacred and beyond exploitation. A Modern worldview sees this kind of relationship with the land as anthropomorphic and backward, acknowledging only the market value of the land's resources. Meanwhile, a Postmodern worldview might see the importance of preserving natural ecosystems but disregard the notion that the natural world might have economic as well as spiritual significance.

The Modern worldview tends to deny or ignore the spiritual customs and beliefs that Traditional cultures value. At the same time, Traditional culture tends to ignore the ideals of equality, individualism, and distribution of power that Modern and Postmodern cultures promote. It is no surprise that the way the West, particularly the United States, is pushing its Modern culture is seen as the corporate monoculture of America™. It is also not a surprise that Traditional cultures around the world are reacting strongly to this bombardment of Western TV, clothes, films, customs, and ideals. This cultural fusion, driven by the Western/American monoculture will only increase in the coming century. As media technologies become more advanced, Modern culture will spread farther and faster than ever. Historically, cultural fusion required actual people to be in contact with each other. However, cultural fusion today requires only images and sounds to spread. In the face of this, it seems inevitable that the clash of cultures, the backlash of the Traditional worldview, will continue as well.

This cultural fusion, this interaction of Postmodern, Modern and Traditional worldviews, has wide reaching effects. Physically, it is helping to change the world we live in. Where the Traditional cultures value living on the land, the Modern and Postmodern cultures prize the urban lifestyle. Not surprisingly, there has been a flood of people from rural to urban centers around the world. This, of course, has its consequences since most cities can manage to employ, house, and feed only a certain number of people, the rest being forced to live in sprawling shantytowns built from the scraps of the inner city residents. This adoption of Modern monoculture also has serious effects on the natural world by eliminating forests, turning grazing land into industrial complexes, and creating enormous amounts of waste and pollution.

On a personal level, these clashes of cultures can become internalized, creating emotional and psychological discord within the people who experience it. People can be torn between the advantages of the Modern and Postmodern cultural systems and the comfort and stability of the Traditional cultural systems they are accustomed to. Worse can be the envy and depression experienced by people in developing nations who have access to media and can see the luxury the Western world lives in but have little opportunity to enjoy such wealth themselves.

This cultural clash not only plays out in the individual's psyche but within the family and community, as well. The younger members of a Traditional family, or community, will be those most likely to adopt the external Modern and Postmodern cultures and ideals. This puts them in conflict not only with their parents, but quite possibly with the leaders and legal authorities of their country. Paradoxically, in many developing nations it can be the youth who adopt a Traditional worldview as a fundamentalist (and occasionally violent) reaction against the ways in which the Modern and Postmodern paradigms have left them feeling powerless. They can see the wealth of

Western societies but have little or no access to economic advancement. They can easily come to view the Modern Western culture as the cause of this disparity rather than as a means for achieving its dissolution.

Consumption as a path to happiness is the primary ideal that Western corporate America™ exports to other cultures via various technologies. Through the pervasive exposure to this message over a long period of time, consumption culture has become a large part of the Modern worldview. It is explicitly materialistic and sees nothing wrong in this. Media critic James Howard Kunstler observes that, “We’ve mutated from citizens to consumers in the last sixty years. The trouble with being consumers is that consumers have no duties or obligations to their fellow consumers. Citizens do. They have the obligation to care about their fellow citizens...”⁶⁸

Not only does the Modern worldview not see anything wrong in materialistic culture, it actively seeks to restrain views that might be less materialistic. It sees materialism as the driving force of human nature and feels that we should harness it for our benefit. It feels that without a materialistic culture, one dedicated to as much consumption as possible, that the economic growth experienced by the world in the past century will collapse, and with it, the basis for our whole civilization. This presumption is built upon a false assumption.

The culture of consumption is predicated upon one simple misconception — it assumes that humans are naturally materialistic and that happiness and human satisfaction come from acquiring goods, or the social status that goes with them. This is a fallacy, because while we humans do enjoy material possessions and social status, these aren’t the things we really crave. Our primary desires aren’t for flashy cars and new smartphones but for love and affection. It’s not so much that we want an oversized house but someone we love to share that house with.

This misapprehension of our desires is evident in the misdirection used by advertising. Do we really want the beer, or to meet the beautiful woman holding it? Do we really want the new car, or the sense of security it seems to project? Do we really need a new pair of shoes, or are we drawn to the idea that they will change the way we look and feel, or make us sexier or more athletic? As advertising critic Kalle Lasn writes, “Corporate advertising (or is it commercial media?) is the largest single psychological project ever undertaken by the human race. Yet for all of that, its impact on us remains unknown and largely ignored.”⁶⁹ Or as philosopher Theodor Adorno wrote in the middle of the last century, “The power of the culture industry’s ideology is such that conformity has replaced consciousness. The order that springs from it is never confronted with what it claims to be or with the real interests of human beings...While it claims to lead the perplexed, it deludes them with false conflicts which they are to exchange for their own. It solves conflicts for them only in appearance, in a way they can hardly be solved in their real lives.”⁷⁰

In this century, these conflicts will be both personal and collective as the clash between Traditional and Modern worldviews, between agrarian communalism and consumerist individualism, spreads around the world. These conflicts can destabilize a community or country, making it more difficult for it to function. Two communities experiencing turmoil in close proximity are a time-tested recipe for war. But, just as there is a threat that culture fusion will destabilize a country, there is also the promise that it will allow for humanitarian advances. As Traditionals lose power within a social structure and Moderns and Postmoderns gain advantage, it is more likely that democracy will evolve, as well as laws protecting individual rights, ensuring the equality of women, religious freedom, and human rights in general.

In many ways, the clash of cultures seen around the world is just a phase of growing pains as the Modern worldview confronts and supplants the Traditional worldview.⁷¹ In developed nations, a similar clash can be seen between Modern and Postmodern worldviews. Unfortunately, these

transitions are not always healthy. The monoculture assessment of this transition is a valid one, and one that results from the Modern worldview disregarding the whole of the Traditional cultures it encounters. For a healthy transition to occur, Modern cultures need to learn to value and respect those parts of the Traditional cultures that can add depth and meaning to their own cultural systems. For most Modern cultures, this will be difficult because they long ago discarded these Traditional customs and ideals. For the part of Traditional cultures, they must learn that while they don't have to forfeit the customs that support their core identity, they will need to transcend those cultural systems that inhibit or retard personal development and freedom. Ultimately, what we require is an Integral worldview that can gracefully blend the healthy cultural codes and customs from all manner of societies while, at the same time, patiently removing those that are dangerous and regressive.

Contemplation of Cultural Fusion

When you think of culture, what things come to mind? Do you feel that there is such a thing as a family culture? How do you think the patterns of behavior in your family differ from other families in your community? Do you feel that your community has a culture that is different from other communities in your region or your nation? How does the culture of your region compare to others? What do you feel constitutes the culture of your nation? What are the major cultural ideals that drive your national culture? How does this national culture compare to the culture of other countries?

Does your country have a great deal of cultural variety, or is it fairly homogenous? Do you feel the character of your nation's culture has been changing over the last century? If so, in what ways do you think it is changing? Do you feel that these changes have been positive or negative? Has this change caused a great deal of conflict within your society? Do you feel your national culture is becoming more diverse, or more homogenous?

How do you think that the culture of your nation is interacting with that of other nations? Do you see conflict in these interactions? What is the root cause of these conflicts? Do you see cultural fusion taking place? How so? Which cultural modes of behavior are becoming dominant in this interchange? How does this make you feel?

How do you think that culture influences society? Do you see cultural changes altering aspects of social structure? How do you respond to this? Do you see these changes as positive or negative? How do you see these changes playing out over time? How do you think these changes will affect the environment? How do you think they will affect your life on a community, family, and personal level? How do you feel that you are changing culturally? How do you want to change culturally? What aspects of your culture would you change? How do you think you could go about doing that? If you would change nothing, would others who do change bother you? How do you think your worldview affects the way you think of culture, personally and globally?

Action: Take a day and devote it to trying to explore as many different cultural products as possible. If you live in a very isolated area, this may be difficult, but if you are near any major city, it shouldn't be too hard. See how many different cultural aspects you can encounter in one day. These products can be food, movies, books, toys, games, TV shows, music, art, or whatever conveys culture to you. As you come across each cultural artifact, ask how you came to have access to it. What country did it come from? How did it get to you? What aspects of your culture are now in that country? How is the world connected culturally? This can be a fun field trip of cultural investigation, especially if you keep an open mind throughout the process. Remember to ask yourself how your worldview informs your reactions as the day proceeds.

Corporate Ecology

Corporations are a legal-based technology, like a government, that allows groups of people to work together to accomplish things they cannot achieve individually. Like many technologies we have invented and implemented, we have allowed the original use and intention of corporations to become perverted and distorted. A corporation is a public charter, a legal structure, granted by the government. It is an ingenious and extremely helpful technology that allows a great deal of work to be accomplished which might otherwise be impossible to achieve.

However, corporations have vastly outgrown their original restrictions and limitations. They are like a vast sea of Frankenstein's monsters turning against their creators and struggling only for their own survival. We are creating a system in which our primary tool for the distribution of our collective resources, our corporations, is being manipulated in a manner that not only skews the benefits of that system to those at the top of its fiscal hierarchy but also does so in a fashion that is likely to be unsustainable at every level. How long can companies continue to merge, continue to divest themselves of workers and manufacturing plants, continue to subcontract production to the developing world, continue to reward their CEOs with hundreds of times the wages of their average worker, continue to spend billions convincing people to buy the products they no longer actually make, and still continue to proclaim that they are creating the best of all possible worlds for us to live in, even in the face of stagnant worker wages versus inflation, abrogated pension obligations, open domination of a political process once reserved for living human citizens, and rampant ecological devastation?

As environmental journalist Mark Hertsgaard notes: "The profit motive is what makes capitalism go, but it is so basic to the working of the system that it tends to override other social goals. It leads the factory owner to care more about minimizing operating costs than minimizing pollutant outflow; it induces the logging company to see more value in a clear-cut forest than in an intact one; it causes corporations to produce products that make money but harm the environment. When such products generate complaints, the profit motive inclines the corporation to deny that the products are hazardous and perhaps even to mount a propaganda campaign to that effect, as the fossil fuel companies (like their tobacco brethren before them) have done."⁷²

Corporations have been around for hundreds of years. For instance, the famous Hudson Bay Company was granted a charter as early as 1670. As these first companies grew in size, they also grew in power and influence. Incidents like the Boston Tea Party were as much revolts against the monopoly of the East India Company as they were against the heavy taxes of the British Empire. In the early years of the United States, corporations were kept on a very short leash. They were granted limited charters that could be revoked for violations of civil laws, and they were viewed with a certain air of suspicion.

Gradually, as these corporations became larger and gained more power, they wielded their influences in the courts and in politics to change the very manner of their creation and maintenance. Slowly, the laws were changed and their charters were granted in perpetuity, and the authority to revoke these charters, to end the corporation, was limited. In 1886, the most significant change to the nature of corporations took place in the court case of *Santa Clara County vs. Southern Pacific Railroad*. The judge in this case ruled, quite to the surprise of many, that corporations should be viewed as "natural persons" and should thus be granted all the rights of human beings. Because the US judicial system is founded on the idea of precedence, this ruling in one state, in effect, made it a ruling in all states. Today, corporations have most of the rights of living human citizens but

none of the responsibilities. The responsibilities of a company lie not with the community or country that supports it but with its investors.

Citizens have responsibilities; corporations cannot. It is not the corporation's responsibility to make profits for its investors. This is the responsibility of those who manage the corporation. But by structuring our corporations as though this were their sole mission, the whole nature of this technology becomes twisted. Corporations can be required to be and do whatever we want them to, because we create the laws and rules that bring them into existence.

Unfortunately, we have been creating laws and rules that give corporations more power than any citizens could ever possess and also shield them from any consequences of abusing that power. If you or I cheat on our income taxes, we will go to jail. If a corporation cheats the government, they pay a fine. If we were to sell on the street a concoction that caused people to get ill, we would go to jail. A corporation pays a fine. If we are negligent in our behavior in a manner that results in someone's death, we will be charged with manslaughter and go to jail. If a corporation does the same thing, or even knowingly does the same thing, it will pay a fine, and maybe settle some lawsuits, but it will still be in business. Moreover, the notion of limited liability, which keeps people from collecting the debts of a company from the people who own the company, also shields them from the illegal actions of that company. So, while people may be dying because a company knowingly put out a faulty product, no one in the company is going to jail for it. Or, if investment banks sell worthless portfolios they are also betting will fail, and the entire global economy collapses as a result, the banks will actually be given government money with which to pay the contractually-required bonuses of the financial architects of the debacle.

The legal notion that corporations are "natural persons" means that they have the right to engage in the political process, and as the US Supreme Court decided in the case of *Citizens United vs. Federal Election Commission* in 2010, corporations have the right to make unlimited contributions to influence elections. Because corporations were created to harness the power and resources of large numbers of people, they can then use those resources and power in ways that average individuals could never manage. While the typical US citizen doesn't even vote, much less contribute to the political process, the average corporation can contribute any amount it likes to the coffers of any and every political party. They can also spend large sums of money on lobbying government officials to see that the laws passed coincide with their interests. But, corporations don't have interests — the people who run them and own them do. When non-citizens are allowed to participate in the political process, it is inevitably warped. Corporations are not people and they are not citizens. They cannot be people because they are not alive. They cannot even be considered as people for legal reasons, because the Thirteenth Amendment to the US Constitution makes slavery, the owning of people, explicitly illegal.

Corporations are shields not only for the interests of the people who own and manage them, but by the manner of their creation, they create their own interests. The primary interest that a corporation revolves around is its own perpetual existence, which necessitates that profit is its primary goal at the expense of all other considerations. All actions and goals are aimed at realizing this bottom-line philosophy. Corporations are thus involved in the political process to ensure or create profit for themselves. Citizens, living human beings, by contrast, engage in the political process for the same reasons their ancestors did more than 200 years ago: for life, liberty, and the pursuit of happiness. It will be increasingly difficult for citizens to actually pursue these lofty goals as long as corporations are allowed to disproportionately participate in the political process.

Now, if this all makes sense to you, if you think a corporation should have all the rights yet none of the responsibilities of a citizen, then you are firmly in the grips of the Modern worldview.

If it strikes you as unfair, and maybe in need of some minor change, then you are likely coming from a Traditional perspective and would like to see the clock turned back a bit on corporate rights. If you think we need to vastly limit corporations or replace them with some nebulous alternative, then you are likely an anti-globalization adherent with a Postmodern worldview.

On the other hand, if you see that corporations are an enormously valuable technology and one that can be redesigned from the ground up to meet the needs of the future, then you are probably looking at them from an Integral perspective. The Integral worldview doesn't want to get rid of corporations; it wants to recreate them. It recognizes that corporations are powerful tools that have been granted too much power. For instance, it is hard to imagine what a corporation would have to do these days in order for the government of any state to revoke its charter. But, by redesigning the corporation, you automatically begin to redesign the way our economy works. The idea is that we can work toward an economy that works for, and puts power in, the hands of the people, the flesh-and-blood humans who toil in it, and not the corporations, the legal structures we have created to manage it.

Contemplation of the Corporate Ecology

When you think of corporations, what comes to your mind? Do you have a relatively positive response? Is it a negative response, or is it neutral? What informs your response? Do you work for a corporation? Is it a large company or a small one? Do you feel valued within the company? Do you feel that other workers are valued? What do you think the primary goals of the company are? How do these goals coincide with the goals you have for life? What would you define as human goals and needs?

Do you think that corporations are designed to help us fulfill any of those desires and needs? If so, which ones? What are your feelings about companies commanding large portions of a market? How do you feel that competition helps and hurts companies? How do you feel about monopoly? How do you feel about the huge gap between the pay of average workers and the pay of corporate executives? Do you think this helps or hurts companies? When a company fires thousands of workers to avoid profit losses, how does this make you feel? How do you respond when you find out that the CEOs with large stock portfolios profit from firing workers?

Do you see any problems with defining corporations as "natural persons?" If so, what problems do you see? What do you think the punishments should be for companies and their managers that break the law? What about companies and managers that are repeat offenders?

Do you feel that corporations should be involved in the political processes of nations? How do you feel about the amount of money that companies spend to lobby governments regarding the making of laws and passing of budgets? Whose interests do the corporations have in mind when engaging in these activities? How do you think the way corporations are structured affects the culture of your nation and community? How do you think corporations affect social structures in the nations they do business in? How do you think corporations impact the environment? In what ways do you think these are positive effects and what ways do you think they are negative? Do you think the way we create corporations should be changed? How would you change them? What would you make the primary goals of corporations? How do you feel that your worldview informs the way you think about corporations and their impact on the world?

Action: Pick one company, maybe one you work for, or one that you are interested in, and try to find out as much as you can about the history and activity of that company. Start with the information that the company supplies publicly and then see what else you can find. Are there any books written about it? What about magazine articles? Try searching the Internet for information

and checking old newspaper articles. What is the general sense that you get of the company? What kinds of things have they been involved in? Have they done things you find to be ethically questionable? Do they have a great record for public service? Do they spend more money on the public relations of their charity than on the charity itself? Is this a company that is creating human profit as well as financial profit? What have you learned from your research? How has it changed the way you think?

Manifest Economic Destiny

It is vitally important that we examine the economic forces that shape our lives and the lives of everyone else on the planet. Beyond looking at what the economy does on local, regional, national and global levels, we need to explore how these economies are structured and how their structures define their results. As economist Michael Rothschild explains, "...unless we understand why capitalism works, we will never be able to make the most of it. We will continue to pursue public policies that fly in the face of immutable economic processes. Prosperity that would lift burdens and brighten lives will be delayed needlessly. Worst of all, unless we can explain the hidden pattern of economic life, the zealots of some future generation will feel compelled to run society through this dreadful exercise yet again."⁷³ In order to create a world that reflects the Integral worldview, we will need to create an Integral economy.

The economy is such a large facet of our lives that we cannot afford to be ignorant of its nature. Each of us should strive to obtain at least a minimal grasp of the complexities involved in economics, from macro to micro, to the ways the two interact. If we do not have some grasp of how the economy functions, we cannot begin to engage in intelligent discourse about it, nor can we have any hope of creating social structures that guide it in a holistic and healthy fashion.⁷⁴

Economies and markets are complex, adaptive non-linear systems. Economist Brian Arthur explains that, "Systems with these properties have come to be called *adaptive nonlinear networks* (the term is John Holland's). There are many such in nature and society: nervous systems, immune systems, ecologies, as well as economies. An essential element of adaptive nonlinear systems is that they do not act simply in terms of stimulus and response. Instead they anticipate. In particular, economic agents form expectations — they build up models of the economy and act on the basis of predictions generated by these models. These anticipative models need neither be explicit, nor coherent, nor even mutually consistent."⁷⁵

The properties Arthur is discussing are: dispersed interaction, lack of a global controller, cross-cutting hierarchical organization, continual adaptation, perpetual novelty, and out-of-equilibrium dynamics. Viewing any economy, particularly the global economy, as an adaptive nonlinear network can give us a great deal of insight in how to organize the social structures that support it. If we create social structures that inhibit the system or create too much structure, such as onerous regulation or licensing, then it will not function as efficiently. Likewise, if we put in place economic structures that eliminate too much structure, creating overwhelming chaos such as abolishing necessary regulations, the system can spiral out of control. However, if we create social structures based on the open acknowledgment of the system's needs and the nature of its inherent complexity, then it will likely function in a more efficient fashion. (For more information on complexity theory, see [Appendix VII](#).)

Independent scholar Howard Bloom has noted five aspects of adaptive nonlinear networks. These are: diversity generators, conformity enforcers, resource shifters, inner judges, and inter-group tournaments. If we compare our global economy to other adaptive nonlinear networks, we can see how radically misshapen it is. In a natural ecology one species or organism would never manage to commandeer a disproportionate amount of the total resources. Yet our global economy allows 10 percent of the population, represented by Europe and the US, to command nearly 60 percent of the world's resources, and it allows single individuals to command tens of billions of dollars in resources. Ecosystems find ways to balance the distribution of resources. The best we have managed to come up with is a system of taxation, which is a *redistribution* of wealth after

the fact, not direct access to resources to begin with. Moreover, while this system of taxation is based on the need to fund government programs, it is variously justified and implemented depending upon the prevailing worldview of a nation's citizens.

While Traditionals and Moderns will accept the need for basic government funding, they often view taxes as an infringement on personal freedom or a penalty for individual agency. Postmoderns tend to view taxes, particularly progressive taxes, as an egalitarian means of redistribution of wealth toward the goal of reducing income inequality. An Integral perspective would see that we do not earn money independently, but rather in interconnection and interdependence with everyone else in society. The greater our income, the greater our interdependence with the rest of society, and the more we are obligated to contribute toward its maintenance.

Historically, we have created the social structures that guide the economy in ways that benefit those who have already acquired a significant portion of the resources available with hopes that these resources will trickle down to the rest of the population. A commonly heard refrain is that a rising tide raises all ships. This metaphor only holds true if everyone's ship is actually in the water. Looking at the global economy as something like a living system, we can see that we should structure our social systems, our laws, and our corporations in ways that allow the system to function with its fullest potential, and for the benefit of all human beings.

Economist David Korten suggests that there is a significant difference between markets, or adaptive nonlinear networks (ANNs), and capitalism which creates markets in a way structured to consolidate power rather than distribute it. He writes that, "...capitalism's claim to the mantle of the market has no more substance than the rogue's claim that he cloaked the emperor in a fine gown. In selectively culling out bits and pieces of market theory to argue that the public interest is best served by giving globe-spanning megacorporations a license to maximize their profits without public restraint, capitalism has distorted market theory beyond recognition to legitimate an ideology in the service of a narrow class interest."⁷⁶

Where capitalism is concerned with money, markets are concerned with life. Capitalism tries to "use money to make money for those who have money," while markets "employ available resources to meet the basic needs of everybody." Capitalism seeks to externalize costs while ANN markets would try to have the users internalize the costs of products and services. Capitalism thrives on impersonal and absentee ownership while ANN markets would promote personal ownership that is rooted in communities and regions. Capitalism sees profit as "an end to be maximized" while ANN markets would see it as "an incentive to invest productively." Capitalism wants free trade, while ANN markets need fair and balanced trade.⁷⁷ Korten lists a number of other differences but his general point should be clear: we need to restructure capitalism to become a fully functioning ANN market.

We have become a nation, and in many ways a world, fascinated with the economy. News programs breathlessly track the minute-by-minute state of the stock markets. Average citizens engage in trading online as though playing some virtual game of *Monopoly*. As political theorist Benjamin Barber puts it, "When profit becomes the sole criterion by which we measure every good, every activity, every attitude, every cultural product, there is soon nothing but profit."⁷⁸

We are caught up in a wave of enthusiasm for profit and material wealth. We have come to equate happiness with money. In many ways we are finally coming to resemble *homo economus*; economic man, the mythical ideal "agent" of economic theory, which supposes that each human being is concerned first and foremost with their own material wealth and is motivated primarily by greed. This, of course, is an exaggeration of human nature. It is nonetheless the characterization

that has informed nearly all of economic theory for the past 200 years. It is a theory grossly out of touch with reality.

Humans tend to be more unpredictable than predictable, tend to be just as interested in the welfare of others as themselves, and while they certainly enjoy material comfort, they also crave (to at least an equal degree) emotional wellbeing, companionship, love, purpose, and spiritual connectedness. The basic assumptions of human nature are only the beginnings of the problems with our current economic models. While the weather and the economy are both examples of complex systems, a room full of meteorologists are likely to agree in general about the condition of the weather a week away, but a room full of economists are unlikely to agree about anything. They are influenced by prior ideological assumptions, misunderstood human psychology, mathematical models which ignore the complex nature of the thing they study, and the biases of their own individual worldviews. It is only when these misconceptions are corrected that we will be able to have a remotely scientific study of economics, and only then be able to create the social structures necessary to fashion an economy that is mutually beneficial to all economic participants.

Currently, as Harvard Professor of Business Rosabeth Moss Kanter points out, “The global economy threatens to create a class divide between cosmopolitans and locals. Cosmopolitans have portable skills, extensive connections, and wide opportunities. Those who are confined to particular places are more vulnerable.”⁷⁹ Moreover, continually advancing technology reduces the need for human labor while increasing productivity. And while this sort of situation is difficult for a developed nation with a sizeable industrial class, most of these countries have the wealth, if not the inclination, to support various social welfare and educational retraining programs. Developing nations, many of which are struggling to acquire, much less maintain, democratic governments with socially supportive infrastructures, are at far greater risk. When a large corporation fires thousands of workers in Europe or the US, the workers have unemployment benefits and welfare systems to help prop them up. In most developing countries these workers are simply out of a job, and soon out of a home. This contributes not only to the general suffering of the labor force, but the unrest and instability of the larger population.

Sociologist Manuel Castells explains this tendency of our current economic system toward inequity in great detail:

“From this perspective, the new system [of a networked global economy] is characterized by *a tendency to increase social inequality and polarization*, namely the simultaneous growth of both the top and the bottom of the social scale. This results from three features: (a) a fundamental differentiation between self-programmable, highly productive labor, and generic, expendable labor; (b) the individualization of labor, which undermines its collective organization, thus abandoning the weakest sections of the workforce to their fate; and (c) under the impact of individualization of labor, globalization of economy, and delegitimation of the state, the gradual demise of the welfare state, so removing the safety net for people who cannot be individually well off. This tendency toward inequality and polarization is certainly not inexorable: it can be countered and prevented by deliberate policies. But inequality and polarization are prescribed in the dynamics of informational capitalism, and will prevail unless conscious action is taken to countervail these tendencies.”⁸⁰

Castells’ analysis is deadly accurate, but so too is his explanation that this state of affairs is not a necessity. As he goes on to point out, unemployment is not the greatest fear of the current processes of economic globalization, but the quality, safety, and level of financial reimbursement

of the labor available to the citizens of the world, especially those on the bottom of the social strata, and principally, those who live in developing nations.

Certainly the employees of the *maquiladoras*, the factories along the Mexican side of the US border, are getting jobs as the result of globalization, and NAFTA in particular, but what sort of jobs are they getting, and what opportunity is there for either them or their children to have better jobs in the future? These jobs are not providing the wages that support community growth and stability, nor are they in any way likely to allow for significant economic advancement. The companies that offer the work are not paying the taxes that would provide for necessary social infrastructures. The jobs supply subsistence wages, not the earnings that would deliver better schooling of the workers' children. Not only are the conditions of the work unhealthy, with exceptionally long hours of mandatory overtime and unsafe or environmentally hazardous manufacturing processes, but any attempts by the workers to organize for greater collective bargaining power are met with immediate dismissal. In fact, many of these factories specifically hire young women because it is felt they will be easier to intimidate, and unfortunately this is often the case.

Moreover, there is always the looming threat that if the costs of labor in one country become too high the manufacturer will simply move where labor costs are profitably low. As Castells points out, this is not the way it has to be. However, a simple softening of the effects of our current paradigm of economic globalization in some Third Way scheme of ad hoc social programs is not what is needed. What we need to do is fully and completely redesign the means and methods of economic practices — locally, nationally and globally — to support a bottom-up system that distributes the resources of the planet wisely among its citizens, while still allowing for the open-market-based competitive innovation that helps create social and material progress.

By allowing large transnational corporations to shift their factories to wherever they can find the cheapest labor, best taxes, and weakest environmental standards, we encourage a race to the bottom of our collective values. We also ensure that developing countries will have a difficult time becoming self-sufficient. They instead become reliant on work from foreign companies. And when these foreign companies decide that labor and conditions are more favorable in some other land, as they did in the developed nations, the workers in these developing countries are left jobless.

Economist Richard Rosecrance explains the neo-liberal perspective of globalized labor by suggesting that "...production should take place where the combination of productivity and labor costs is most favorable."⁸¹ As he points out, globalization encourages people to strive for the sort of middle class life that is possible in Western countries. Or, as he says, "Virtualization places a premium on the attainment of middle class goals and interests — good jobs, education, and a consumer existence."⁸²

Certainly this striving is good. All people should have better jobs, safe communities, nice homes, plentiful food, clean water, and much more. But the problem is that we in the West originally got these things by being largely self-sufficient economically. Certainly, the US has always traded internationally, but even in the early 1900s, Henry Ford paid his employees wages that allowed them to participate in the car economy he was creating. This is not the case today. For instance, the companies that Nike and Apple sub-contract to don't pay their workers enough to buy the shoes or iPads they make, and neither do most of the other companies that manufacture goods in developing countries. A small percentage of people in developing nations will attain a lifestyle resembling those of the West/North, but most will not. And even these gains will only be sustained if the world economy can manage to create a constant feeding frenzy of consumption. Globally, we have overproduction, more labor than we need, rapidly developing robotics

manufacturing, and a nascent 3D printing technology, all of which threaten to upend our traditional productive labor needs. In addition to which, we can barely consume all of the products we now produce. What sort of future does that suggest we are creating?

We need to foster and promote an Integral approach to the world economy that places the resources of the planet and productivity of the human population on a path that benefits not simply corporations and the wealthy, but every citizen of the world. Doing this will not be easy. As environmentalist and entrepreneur Paul Hawken and funders of the Rocky Mountain Institute Amory and Hunter Lovins explained in their book, *Natural Capitalism*, “Basic human needs can be satisfied by a combination of products, forms of political and social organization, values and norms, spaces and contexts, behaviors and attitudes. Industrial capitalism rewards only the sale of monetized goods and services, so it naturally focuses on tangible, material ways to meet human needs. To be sure, material goods are useful, and up to a point indispensable, but only so far as they serve people, not the reverse. When physical production and economic growth turn from means to ends, they yield outward affluence accompanied by inner poverties expressed as social pathologies. The shopping mall is a pale substitute for the local pub, TV sitcoms for family conviviality, security guards for safe streets, insurance for health.”⁸³

An Integral view of the economy attempts to fully acknowledge the whole spectrum of its existence, from its dependence on the physical and natural worlds to the way humans support and are supported by it. Along this path toward an Integral conception of the world economy, it is important to keep in mind exactly what the purpose of that economy is. Generally speaking, our worldview will inform what we feel that purpose to be. The wider our worldview, the greater the depth of purpose we will expect from the economy.

An Integral worldview would not demand of the economy that it supply cheap labor and plentiful amounts of low-priced products to be consumed and discarded in ever-greater quantities. An Integral worldview would be concerned with supplying jobs to all citizens of the world, and, moreover, jobs that allow them dignity, safe working environments, a living wage, and some manner of pursuing happiness. It would attempt to provide goods that are useful and do not adversely impact the natural or human environments, with their manufacture, use, or disposal. It would seek to provide equality of resource distribution rather than a winner-take-all approach.

Instead of desiring markets free of restrictions, an Integral economy would seek to establish markets that are fair — allowing all the players equal access to goods and capital. It would view capital not as something only to be used to make more capital but as a resource to be conserved and used wisely. It would see the necessity and importance of corporations, but also acknowledge that their structure and function should serve humanity first, rather than merely those who own large shares in them. In short, an Integral view of the economy, national or global, would see it as an extension of human endeavor, not its source, and it would seek to structure economic activity in a way that actively attempts to propel humanity toward its highest aspirations rather than tie it down to its base instincts.

Unfortunately, until enough people in positions of influence can begin to see the economy from an Integral perspective, progress in this area will be slow. Even when enough policy makers have been convinced of the wisdom of looking *beyond* the needs embodied by corporate profit to the needs reflected in human and planetary profit, the going will still be tough. Those making a killing with the current system will be extremely reluctant to change their ways as to benefit a wider spectrum of economic agents. But we must change our economic systems if we are to have any real hope of creating a world in which every living human being has equal opportunity to access the wealth of that world. Such a world where economic activity is not predicated upon

materialistic desires creating ever-expanding consumption of products and resources, but rather upon spiritual desires, promoting individual and collective wellbeing, will necessarily look radically different from our world today. However, the sooner we begin to envision it, the sooner we can attempt to make it a reality.

Contemplation of Manifest Economic Destiny

The global economy is such a massively complex system of interconnected complex systems that contemplation of it can, at first, seem overwhelming. Begin contemplating the economy that is closest to you. What is your local economy like? How do you interact with your local economy? Where do you shop? What sort of things do you purchase? Are any of the things you purchase made locally? Which ones? What about your regional economy? How does your local economy impact the regional economy? How do you contribute to the regional economy? What things do you buy from your state or region? How does your region affect the national economy?

How does the national economy affect the regional and local economies? What is your relationship with the national economy? What things do you purchase that are made within your national borders? What about the global economy? How does the economy of other countries affect the economy of your country? Which countries have the greatest impact on your national economy? How do you contribute to the global economy? What things do you purchase that were made in other nations? What is the ratio between your purchases of goods from other nations to goods made in your own nation? What about the ratio between the things you purchase that were made locally or regionally and those made in other parts of your nation or the world?

How do you think your local and regional economy affect your local and regional culture? What do you think the relationship is between your national culture and your national economy? How do you feel that the global economy is affecting global culture? Do you think the global economy is affecting global societies? What do you think this effect has been? How do you feel these effects have been positive and how do you feel they have been negative? What effects do you see the global economy having on your regional and local social structures? How do you feel that the global economy has affected the environment? Do you see it affecting the environment nationally? What about locally? Do you think it has affected the environment of other nations? Do you think this has been a positive or negative effect?

How do you feel about free trade? How do you feel about corporations from developed nations using labor in developing nations to produce goods to sell back in their home countries? How do you feel about the corporate hunt for cheap labor, tax breaks, and lax environmental standards? What do you see as the consequences of this? When you consider the global economy and all the individual economies as complex systems, how does this influence your reactions? How do you feel that your worldview influences the way you think about the global economy and international economic relations?

Action: This is a simple project to see how connected you are to the global economy. Choose 20 objects in your home at random. They should be a range of things, from items of clothing, to food, furniture, appliances, etc. Then take a little time to see where each product was manufactured. Which countries were each of these things made? If you can, ascertain where each of the components of the items were made. For instance, your TV or computer may be assembled in the United States, but all of its components may be manufactured in South Korea, Taiwan and Indonesia. How connected are you economically to other parts of the world?

Where and How We Live

From September 1999 until September 2000 I traveled most of the continental United States as a tour manager for a corporate exhibit. During that time I had the opportunity to see over 65 major cities, and much of the country in between. Around the nation, I found that inner cities were being deserted as living space and used, if at all, solely for business. Developers, aided by local governments, pushed the urban living mode farther and farther outside the city centers. Urban America™ is in the process of becoming one giant strip mall of ubiquitous stores and cookie-cutter housing developments. Often, my traveling companions and I would be confused as to what city we were in because it looked so much like the last 20 or 30. It had the same chain stores and the same chain restaurants in nearly the same proximity to one another. While this was occasionally helpful in finding a meal or office supplies, it felt culturally stifling in its homogeneity.

While the recent wave of urban renew programs, led by the pioneering example of Portland, Oregon, are pushing to revitalize downtowns and re-purpose long-disused urban spaces, the trend of increasing urban sprawl continues. Part of the problem of urban sprawl is due to our overreliance on cars as a means of transportation. As urban planning critic James Kunstler notes, “Americans love Disney World, above all, because it is uncontaminated by cars, except for a few antique vehicles kept around as stage props. By and large, they do not know that this is the reason they love Disney World. Americans are amazingly unconscious of how destructive the automobile has been to their everyday world.”⁸⁴

The automobile has created a series of social and cultural dynamics with unintended, but long lasting, consequences. More cars = More roads. More roads = More traffic. More traffic = More traffic jams. More cars and more roads = More suburban expansion. These equalities start anywhere in the chain. If you want to make sure you will have more cars, build more roads. General Motors knew this, which is why they bought out and dismantled the railroad systems of Los Angeles in the 1950s.

The problem with this expansion of our cities is many-fold, but much of it centers on cars. Cars appeal to us because we have been inculcated to believe that the individual freedom afforded by personal transportation is identical to the freedom and strength of our psyche. But how free are we really when we are required to drive an hour a day just to get to work and when we spend *days* of time each year sitting in traffic jams? This isn't making us happier. We have become free to be unhappy at any cost. And the costs are fairly high. There's the environmental cost to air quality and global warming, the ever-longer drives, and the ever-fewer places to connect with nature, to name only a few.

The truth is that we don't really want cars — we want transportation. And in most cases we want transportation simply because we have allowed our urban living environment to be constructed in a way that necessitates us getting from one distant place to another and then back to our distantly-situated home. If we eliminate the distance we eliminate much of the need for transportation, thus eliminating the need for more roads and more cars.

Even the briefest Integral examination of the urban and rural situations in the country would find serious differences from our current, overdevelopment-minded path. In part, this is because an Integral view of development and progress are a bit different than those of the dominant Modern perspective. What we currently think of as development is really nothing more than unchecked growth. Unfortunately, the worldview with which most developers and politicians perceive the

world from (the filter they look at life through), is wholly inadequate for the problems of the day. (See the chapter [What is Progress? Or How to Tell and Hawk from a Handsaw.](#))

Traditional, Modern, and Postmodern worldviews are insufficient to deal with the questions of urban sprawl, disintegrating inner cities, loss of prime farmland, large-scale corporate farming, or the social and cultural effects of these situations upon urban and rural communities. A Traditional worldview might seek to turn the clock back to a previous time that will not be adequate for the conditions of the present. Meanwhile, the Modern worldview tends to be so utilitarian in nature as to view the natural world as merely a commodity to be exploited for financial profit and personal satisfaction. Conversely, a Postmodern worldview may reject the advantages of industrial farming, urbanization, and development for a romanticized idea of nature.

Only an Integral worldview, one that examines the details of the situation from all perspectives — cultural, social, economic, environmental, personal, psychological, and yes, even spiritual — can potentially cope with the problems we are creating. Moreover, only an Integral worldview will be able to examine these problems from various levels of depth, including the individual, the family, the community, the region, the nation, and the world. Additionally, only an Integral worldview will seek to incorporate mitigating issues that influence the situation, which in this instance would range from global produce production and consumption patterns to the questions of genetically modifying crops and livestock.

A Modern worldview sees nearly all growth as good and all financial gain as beneficial. A Modern worldview does not weep when a field that once produced a thriving crop of soybeans is paved over to provide parking space for an outlet mall. To a Modern worldview, the market demands more space, and farmland fetches a fair market price. The Modern worldview has become so disconnected from nature that it no longer sees the value of nature in and of itself, and moreover, it is unable to see any value of nature beyond one that is primarily monetary. So, for instance, when a corporate farm begins buying up all the family farms in a region, as is happening frequently in the Western states, leaving the once prosperous and resilient farming communities to become ghost towns (unless they are benefactors of the current shale oil boom), a Modern worldview sees an increase in efficiency, an increased crop yield, and a mighty profit. In short, the Modern worldview sees this type of development as a clear indication of what it would consider progress. An Integral worldview sees things differently.

Real progress for the urban and rural state of affairs would be the development of manufacturing and commercial zones that did not induce sprawl (wasting prime farm land), but instead utilized existing and abandoned industrialized land. The Integral idea of progress would be to reclaim and remake urban centers to be able to provide affordable housing for the city's workers rather than inducing them to build gated communities where sunflower fields once flourished.

An Integral worldview wants a city that is pleasant to live in; that allows us to work close to home; that provides efficient and reliable private and public transportation; a city that doesn't separate us from the natural world; that has economic, cultural, and social opportunities for all of its citizens; that creates a sense of community rather than isolation; and that provides a healthy atmosphere to raise our children. This is the vision we should be creating for our cities, yet how many of our cities are being constructed with these desires in mind? And the situation is even worse in developing countries that are trying to mimic the madness of our Modern methods with a disastrous result.

We need to construct and reconstruct our cities to align themselves with the full range of our human needs — psychological, cultural, social, economic, environmental, and again, spiritual.

And just as importantly, we need to create this same vision for our rural communities. Rural communities are losing an acre of farmland every minute.⁸⁵ Instead of fields of wheat and corn they are being given Walmarts, Home Depots, chain restaurants, and insipidly identical housing tracts when they need vibrant small farms with diverse crops, local businesses owned by local people, and houses and towns that fulfill the full range of their humans needs and do not simply provide a place to sleep before driving back into the city.

Moderns, developers in particular, will tend to scoff at these notions and retreat to their somewhat justifiable claim that we can always create more farmland, so what's the big fuss? The fuss isn't simply that we are losing farmland, or that we are losing a traditional way of life, it's that we are losing these things and that we are not getting the things we really need in return. To flee the city and buy a house in the country 10 feet from your neighbor's home with a lawn the size of a Buick, where you have to get in your car to buy groceries because there are no sidewalks, is not a substantial leap of progress from living in an apartment in a city with a nearby park and plentiful public transportation. Of course, if your city does not have parks or reliable public transportation and your neighborhood is blighted by closed shops and derelict buildings, a postage-stamp backyard will seem a vast improvement. City planners and private developers with a Modern worldview are not interested in building communities and providing the real needs of human existence. They are interested in increasing the tax base and turning a profit, even when turning the *soil* might benefit the community more.

The real problem is bigger than the loss of farmland or urban sprawl. The real problem is that the Modern worldview is driving the world we are creating, and in the process, it is producing situations, some problematic and some dangerous, that only an Integral worldview will be able to see in a complete enough manner to suggest possible solutions. These problems will only be exacerbated as urban populations continue to increase. As of 2012, less than 18 percent of the people in the United States live in rural areas, and globally, since 2010, more people live in urban areas than rural areas. There are those, however, who understand the problems this massive migration creates and are working to find solutions. For example, in regards to the issue of urban and rural planning there are some developers who have already found novel solutions, such the anti-sprawl zoning laws spreading around the country and the ideas of New Urbanism found in communities like Seaside, Florida.

New Urbanism, a design movement begun in large part by architects Andres Duany and Elizabeth Plater-Zyberk, is an attempt to replace the haphazard type of development so typical of most urban sprawl with a set of design principles genuinely intended to keep the needs of the human beings in the community as the central focus and driving force behind its construction. Their design principles include such aspects as trying to retain open spaces for nature and attempting to keep school and work spaces within walking distance from homes.

Another example of Integral thinking is the experiment in urban design called Arcosanti that has been slowly taking shape since 1970 in the desert, 70 miles outside of Phoenix, Arizona. Arcosanti is the wild fantasy made partially whole by the late architect Paolo Soleri, a one-time student of fellow visionary Frank Lloyd Wright. Like some modern day Geppetto, Soleri began fashioning a community in the desert that he hoped would one day come alive on its own. Arcosanti is an arcology (a term Soleri coined) that combines the words architecture and ecology.

An arcology is a self-contained, single-structure city that exists in harmony with its ecological surroundings. Arcologies maximize space by eliminating streets and other wastes of land through complexification. Teilhard de Chardin originated the idea complexification, which suggests an arrow of complexity in evolution from wider, less complex states to smaller, more complex states.

As Soleri writes, “If the city is an organism made of all the intricate interaction of bodies physically peripatetic and demanding, mentally diffuse and willful, then the city can only find a reasonable chance for success within the same rules disciplining any other living phenomenon: The rule of duration of complexification and miniaturization.” Ken Wilber refers to this as *greater depth/less span*, and it finds expression everywhere in nature, from living cells to the human brain.

Within an arcology nothing would go to waste, each waste product becoming the energy source of another symbiotic system, much like in an ecosystem. As for urban sprawl, it would all be upward, rather than outward, leaving the surrounding countryside either as farmland, or as nature preserves. Soleri envisioned arcologies ranging in size from the 5000 citizens he hoped will one day live in Arcosanti, to giant mega cities housing several millions. His ideas are revolutionary and his designs, such as those found in his classic book *Arcology: The City in the Image of Man*, are visual delights that send the imagination soaring.⁸⁶

Soleri believed that a city should provide an arena for economic life, but this should not be its central goal. As he pointed out, “Economic incentive is not a realistic guideline to the intricacies and the mystery of life.”⁸⁷ As economic exchange is only a fraction of our human lives, it should only be a fraction of the lifeblood of our cities. Cities need to address our human needs beyond the need to buy and sell. But this is not the direction they are taking. The whole of our human existence is often reduced to our consumption of goods and services, and our cities have come to reflect this. Our cities are organized around entirely misguided principles. We are not *homo economicus* any more than we are *homo shopicus*.

Or, as James Kunstler puts it, “The underlying problem that Los Angeles and the rest of the ‘developed’ world faces is how to fashion an economy that is not an enterprise of destruction. That is, how to create sustainable economies and sustainable human habitats — cities and towns — for those economies to dwell in.”⁸⁸ Our cities need to be guided by the principles that guide life everywhere. We need to begin thinking of a city as a complex dynamic system, as a living system, like an ecosystem.

Thinking of the city in this fashion, we can begin to see that separating its aspects is detrimental to its very survival.⁸⁹ The reason our bodies function so well is because they are compact as well as complex. The efficiency of our bodily systems would be much reduced if our organs were twice as separated. The same is true for an ecosystem. If energy and resources cannot circulate within the ecosystem because of distances that are too great, or there are gaps in the connections between living things, then the whole of the system will suffer. The same is true for our cities. By spreading everything farther and farther out, we only ensure that the separate parts, particularly the living parts, like us, will suffer.

Another example of innovative thinking in regards to structuring societies and living in harmony with the environment, particularly in rural areas, is the Columbian village of Gaviotas. Founded in 1971 by eco-futurist Paolo Lugari in the inhospitable savannas of the Columbian interior, the small town is 16 hours from the nearest major city and even farther away by ecological and social measures.

Working over the years with engineers, headed by Jorge Zapp, the people of the small town have intentionally developed technologies that not only improve their standard of living but do so in a way that does not degrade or endanger the environment. From windmills that work in low winds and can be maintained by local farmers to solar water heaters powerful enough for cooking and sterilization, they have sought to create technology that is both appropriate to their needs as well as ecologically and economically sustainable. Even their transplantation of non-indigenous

pine trees for sap production to generate jobs and revenue was done with the consideration of environmental impact.

Gaviotas is a perfect model of the kind of ingenuity that will be required to help developing nations, and impoverished rural communities in developed nations, increase their standards of living without resorting to the environmentally and socially devastating processes of Western over-industrialization. This small town of innovators is leading the way in creating solutions that are cheap enough for poorer societies to afford and that do not have the cultural and environmental side effects of the technologies from their northern neighbors. Gaviotas is an example that all small towns and peoples can learn from.⁹⁰

We need the imagination of people like Paolo Soleri and Paolo Lugari, but more than this, we need an Integral perspective capable of taking these ideas seriously and embarking upon the thankless, tiring work of implementing them. We don't need it simply to save our farms, or to save our cities. We need the Integral worldview to save our global civilization from the dangers, potential and already present, that the Modern, and in some ways the Traditional and Postmodern, worldviews are creating. I'm sure you know what they are. You can probably name the list yourself: global warming, environmental degradation, nuclear waste disposal, the proliferation of weapons of mass destruction, genetic engineering, computer privacy, nanotechnology, economic instability...the list goes on and on. But it doesn't need to. We can change the way we see the world and we can change the way we create our lives within it.

Contemplation of Where and How We Live

Do you live in an urban or suburban area? Do you work in an urban area? Do you commute to an urban area from a suburb? What is your urban area like? Is it a small city or a large metropolis? What are the problems that this urban area has? Is there a problem with transportation? Are there many traffic jams? Is the city designed with public transportation in mind? Is there adequate public transportation available if you want to use it? Do you need to have a car to work or live in or near this urban area? How does this urban area compare to other places around the country? Is the urban area, the city, segregated economically or racially? Do you have gated communities? How do these affect the rest of the city?

How is the downtown area utilized? Are there many public services? Are there many parks? Is the natural world at all available to the citizens who live in the city? How much of your city's resources are used to maintain the traffic system? Could your city be redesigned to better handle the transportation of people and goods? Does your city meet your basic human needs? Does it have safe streets? Does it have places to shop and work near the places to live? Is there a sense of community in your city? Does your city create a great deal of waste and pollution? How does your city compare in these respects to other cities in your nation? How does it compare to other cities in the world? How do you feel about the contrast between urban and rural areas of the country?

Do you live in a rural area? How far do you need to drive to get to work or to shop? How long do your children need to ride the bus to school? What are the public services like in your community? What are the private services like? Are they adequate to the needs of you and your fellow citizens? Is your community affected by urban and suburban sprawl? Have you seen farmland replaced by housing or commercial developments? How has this affected your community? How has this affected you?

Have large, corporate, box stores replaced local shops in your town? How has this affected the employment and living standards of your community? Does your town have mainly family-owned farms, or are they primarily owned by large corporations? How has this potential change

in ownership affected your community? Have energy companies sought out leases in your community for oil or gas exploration? How has this affected your community? Do you feel the economic benefits outweigh any potential environmental dangers from oil and gas exploration and extraction?

How do you feel about the way the urban areas are sprawling ever farther outward? How do you see the relationship between urban, suburban, and rural areas changing? How would you like to see them change? How do you think rural/urban planning affects the culture and society of the citizens who live there? How do you think rural/urban planning affects the environment? Do you think these are mostly positive or negative affects right now? What would you alter about the rural and urban areas you are familiar with? How could this be done? What could you do to facilitate this change? How do you think your worldview shapes your perception of urban issues?

Action: Take a few hours and reimagine your town, suburb, or city in a more ecologically and human-friendly fashion. Write down the things you would like your town or city to provide and how you would have it provided. Then compare this to what your town or city does provide and how. In examining the list, look for ways that the place you live could be changed with simple and elegant solutions to help provide the needs you have listed.

Are any of these changes things you could attempt to convince your town or city to implement? Are the changes as simple as new zoning laws? Are they more complicated like providing public transportation and discouraging the use of cars in shopping zones? Is there some way you can have an impact how the place you live is designed and run? Is this something you would devote your time to? If not, at least devote some time to thinking about what kind of place you want to live in.

Future Tech

The myth of Icarus is a cautionary tale, evoking both the importance of innovation and the dangers inherent in it. Icarus took the invention of wings too far too fast, flying unwisely close to the sun, his wax wings melting, sending him plummeting back to Earth. The hubris of the story lies not in the creation of wings, but in hastily using them beyond their capacity for flight. As a society, we are faced with similar situations where inattentiveness to the limits of our knowledge could have unfortunate results as we implement both old and new technologies. We must dream boldly of the future, but we must also remember to waken from our reverie and examine our true needs and goals, with clear heads and open eyes, before we attempt to turn our visions into realities.

Genetic engineering presents one of the most potent and powerful technologies to shape our dreams of the future, offering extraordinary promise as well as potential disaster. Social and environmental activist Jeremy Rifkin cautions that “Genetic engineering represents the ultimate tool. It extends humanity’s reach over the forces of nature as no other technology in history, perhaps with the exception of the nuclear bomb, the ultimate expression of the age of pyrotechnology. With genetic engineering we can assume control over the hereditary blueprints of life itself. Can any reasonable person believe for a moment that such an unprecedented power is without substantial risk?”⁹¹

We do not have nearly enough knowledge about how the genetic interaction of millions of species might be affected by genetic engineering. We don’t even have enough information about the system that is the body to predict with any real accuracy beforehand the full effects of genetically engineering humans. The level of understanding needed to gauge how genetic engineering will play out in an individual organism is simply beyond our current grasp. The depth of knowledge necessary to fathom the genetic complexity of ecologies is even further beyond our current abilities. The specter of the unknown should caution us to proceed in this new science with the precautionary principle as our guiding standard.

During the past few decades, the biotech industry and its GE eco-optimists have been busily modifying many staple crops throughout the world. As of 2013 in the US, 98 percent of the soybean crops, 88 percent of corn crops, and 93 percent of cotton crops are genetically modified.⁹² Unfortunately, we do not know and cannot accurately predict what the long-term effects on the environment or on humans might be from modifying any or all of our staple crops.

The GE eco-optimists, perceiving the situation from a Modern worldview, would like us to modify all of our crops and livestock: from corn and beans, to tomatoes and apples, to cows and pigs. They believe that GE agriculture will benefit humanity, and they list a number of ways such crops would be good for us. They believe they can create crops that are more resistant to disease and pests as well as make them more resistant to herbicides. They also believe they can increase the productivity of plants or animals by making them larger, and that they can increase the quality of plants and animals, making them taste better to humans. By and large, they believe they can improve on nature in nearly every way.

Some of these beliefs are so far borne out by reality: Monsanto created Bt corn, with genes that code for the expression of *Bacillus thuringiensis* bacteria, acting as a built-in pesticide. The company has also added genes to make corn and other crops more resistant to glyphosate herbicides, such as their Roundup product. Additionally, geneticists have modified rice to add beta-carotene in an attempt to alter a staple crop of the developing world to provide a needed nutrient to potentially as many as 670,000 children with a vitamin-A deficiency. While this golden

rice has yet to be introduced to farmers' fields, preliminary tests suggest that as little as a single cup of cooked rice might provide half of a child's daily vitamin-A requirements.⁹³

GE eco-optimists also proudly proclaim that the majority of scientific studies have proven GMOs (genetically modified organisms) to be as safe as traditional food and that there has never been a documented case of allergic reaction to genetically modified food in the United States. This is true. Even scientific organizations like the American Association for the Advancement of Science and the European Commission have released statements supportive of the safety of the current wave of GMOs.⁹⁴ The majority of the scientific research done so far on today's GMOs strongly suggests that, by and large, they are safe.⁹⁵

However, there are dissenting voices in the GE scientific community who dispute the safety of GMOs, and there have been studies conducted suggesting that GMOs pose potential risks to humans, animals, and the environment. There are other studies suggesting that GMO crop yields are not significantly higher than traditional crops, and that GMO crops encourage increased use of chemical herbicides that are detrimental to soil quality and the purity of water tables. Other concerns are mutative resistance and genetic drift, whereby genes from GE crops are transferred to local non-GMO or organic crops. This means the weeds that the increased use of herbicides are supposed to kill instead adapt and develop a resistance to the chemicals, requiring even more herbicides. These anti-GE scientists and activists believe that the primary beneficiaries of GMOs are not farmers or consumers, but the GE companies that create and sell them.⁹⁶

Moreover, absence of allergic reactions to GMOs in the lab cannot easily be confirmed in the general population of the United States due to the lack of proper product labeling, which the GE industry has fought against. The absence of product labeling makes it difficult or impossible to correlate potential allergic reactions in the population to any specific GMO food. Furthermore, the patent regime imposed by GE companies means that farmers using GE crops cannot save seed from their crop for replanting because the genetic code of the seeds themselves is considered property of the GE companies who designed them. Not only does this create an unnecessary financial burden on the farmers, but it also sets up a dangerous precedent — if some future GE company engineers a new kind of farm animal, would the progeny of that animal be in violation of the company's patent? Could future, genetically modified humans be unable to procreate without the permission (or paid licenses) of the company that holds the patents on their genes?

While the current, limited range of GMO crops may be relatively safe, releasing large quantities of GMO organisms — vegetable and animal — into the environment creates highly unpredictable situations. We have no way of envisioning what the results of this will be. To assume that the effects will be negligible or benign is the ultimate expression of over confidence. Ecologies are complex systems, living adaptable systems, and they will respond to abrupt and significant changes, often with abrupt and significant adaptations. Whether humans can subsequently adapt to these environmental changes, and whether they are beneficial or detrimental to human needs, will remain unknown until it is possibly too late to adequately respond to a potential crisis.

Generic engineering also applies directly to humans. Research into the human genome offers a great deal of promise for the advancement of human health and welfare over the coming century. By understanding how genes code for and manufacture certain proteins, or how they act in concert, we can begin to understand the origins for some of the most debilitating diseases. There is also the strong possibility that we will gain the ability to correct genes that code for diseases both before and after birth. Somatic gene therapy is the correction of genes that do not pass on to offspring. This sort of gene therapy would, assuming it didn't cause problems, alter the genetic code for the cells of a person's body, thus removing a genetic defect. However, these changes would not be

passed on to this person's children. The changes to genetic information in germ-line therapy do pass on to a person's progeny. When people talk about the possibility of changing the physical characteristics of their children through GE, they are talking about germ-line therapy. These changes, alterations in utero to the child's DNA, would be passed on to the child's own future children.

GE eco-optimist Lee Silver sees the possibility of the human race dividing into two distinct species, those who have the money to genetically modify their children and those who do not: the GenRich and the GenPoor.⁹⁷ He suggests that this new, GenRich species might eventually have as little interest in mating with the old one, as we might have in mating with chimpanzees. Oddly, he fails to point out that this GenRich species would likely further subdivide over time. While such a radical prophecy would only be possible many years down the line, it is still a possibility, particularly if we apply only the ideas of free market capitalism to the genetic engineering technologies that will be created in the coming century. The problems of access to GE technology will inevitably divide societies in some fashion. Those who can afford it will be able to use somatic therapy to correct genetic defects while those who cannot will be left either to older technologies, or to deal with them the way so many people are left to deal with diseases today — by dying from them.

Conjure up any nightmare scenario you want, from GE super humans to sideshow children born with the genes of plants and animals, and all are becoming a scientific, if not socially acceptable, possibility. What will determine their reality is the manner in which we proceed to investigate and implement these new technologies. If we blunder ahead with the optimism of a Modern worldview, entranced by dreams of genetic 'progress' and motivated by profit and personal gain, we will most likely reap the disastrous consequences of our insouciance. Likewise, if we abandon all GE technology as some Traditional and Postmodern advocates suggest, we may very well abandon our ability to deal with many of the problems we will face in the coming century, from feeding a burgeoning world population, to mitigating the effects of environmental degradation, to curing once incurable diseases.

An Integral worldview understands that GE technology needs to be guided, not simply by short-term financial profit (which is the definition of the Modern corporate perspective), but must be aimed at creating long-term benefits for all people, with minimal risk. This may mean that some technologies, like genetically modified foods, should be implemented only after they have been proven safe for future generations, while others, like germ line genetic modification, should be abandoned as simply too dangerous to implement with our current wisdom. If we can manage to move forward with GE technology while embracing an Integral worldview, seeing the dangers while motivated by the desire to enhance the welfare of all people without undue risk, then, while we may not achieve any sort of paradise, at least what little paradise that remains will not be lost to us.

The recent advances in genetic engineering would not have been possible without the advances in another technology. Computer technology has changed our lives significantly over the past few decades, but the rate of change we are about to experience in the coming century will make this previous pace seem slow and plodding. As you might expect, the worldview with which we approach this technological transformation will, in large part, inform our reactions to it and our thoughts about how we should proceed with it.

How does changing technology, specifically the advances in computers and robotics, alter our world? An Integral perspective suggests technology will affect all aspects of our being: environmental, personal, social, and cultural. Moreover, these effects will play out differently as

these quadrants interact and as the effects percolate between the levels of depth within each. These effects will not be simple extrapolations of the conditions we are currently experiencing. As the pace of change for these technologies increases, so too will the pace with which their effects play out in the world.

Increased speed and memory of computers is a nearly unstoppable condition of technological life. Moore's law (really an observation, not a hard and fast rule) famously states that computing power doubles every two years. Although our current technology for creating chips will reach its physical limits sometime soon, there are other new technologies (like carbon nanotubes) in the works to continue the revolution, and possibly even accelerate it. Given this ever-increasing computing power, futurist Ray Kurzweil estimates that sometime around the year 2045, computers the size of current desktop models will have computing power equivalent to the human brain.⁹⁸ This strikes many as an overly optimistic prediction, especially as our current global computing prowess in its entirety narrowly matches that of a single human brain.⁹⁹

Regardless of how quickly computing technology matches the abilities of the human brain, it seems inevitable that it will eventually do so. And, as computing power increases, the reliability and uses for robots will expand. With this expansion, robots will slowly obtain more and more capabilities, eventually equaling or exceeding humans in the ability for manual labor. In many industries this is already the case, but currently, robots are generally single function units. As robotic technology advances, it will be possible to manufacture robotic units that are multifunctional and capable of learning new tasks, thus expanding their industrial uses.¹⁰⁰ In *The End of Work*, Jeremy Rifkin raises a number of concerns about the state of a world with an increasing population but a decreasing need for manual labor. As robotic technology advances, it will continue to displace manual labor across all sectors. The same will become more true for non-manual labor as well. When robotic technology replaces the cheap labor of developing countries, what becomes of these unemployed citizens of the world who have allowed their self-sufficiencies to be parlayed into a dependence on Western companies and consumers? What becomes of the low wage earner in the developed countries when a robot can make a hamburger just as efficiently as a human at less cost per hour? These are problems we should address not as they arrive but well before they emerge so that we can begin to alter our social structures to accommodate them.

Another concern that arises from computers relates to the amount of information they allow us access to. It seems probable that the trend of access to ever-escalating amounts of information will increase apace with computing power. There are plenty of critics, such as Neil Postman and Theodore Roszak, who believe we are currently drowning in a sea of information. This Info-glut will continue, however, as computers become more powerful. They will become able to supply greater assistance in navigating this ocean of information. The advent of preliminary artificial intelligence (AI) programs and adaptive software may make it possible to incorporate this flow of information into the daily life of the average citizen.

Every hour we "live" in a virtual world, whether by being glued to a sitcom, or by surfing the Web, or posting to social media sites, or texting someone, is an hour we are not really engaging with the physical world around us, and we are not fully present with the people in our presence, our wife or husband, our children, or friends. In small doses this is perfectly acceptable, as we all enjoy a little distraction, entertainment, or education. When accepted as the dominant mode of existence, it can sever us from what is real in our life. With computers able to simulate our going anywhere, doing anything, and robotic technology to tend to our needs, will we be living a better life through technology, or will we be living a life *as* technology?

With the advent of ubiquitous computing, enabled by planting tiny “smart chips” in all manner of products, and the expansion of the Internet, we will have more access to information about the world, but the world will also have more access to information about us. Those collecting this information will then be able to use it however they see fit, unless we place strict rules and regulations in place to protect our privacy. As Stanford law Professor Lawrence Lessig writes about information age social concerns, “There is a part of anyone’s life that is *monitored*, and there is a part that can be *searched*. The monitored is that part of one’s daily existence that others see or notice and that others can respond to...The searchable is the part of your life that leaves, or is, a record.”¹⁰¹ Both of these aspects of our lives, the monitored and the searched, are becoming increasingly transparent and open to others as our technology becomes more invasive.

The ways in which corporations and governments collect and store information about our personal life and Internet habits using cookies, webbots, email and social media scanning software, public cameras and the like will only expand as the technologies expand. Ubiquitous computing offers not only the possibility that advertising will be specifically targeted to your interests it may also target your weaknesses. Ubiquitous observation, from both corporations and governments, means that fewer and fewer aspects of our private life are truly private. Without a meaningful system of check-and-balances for both government and corporate observers of our personal data streams, private lives, and public activities, privacy may become something only available to those not fortunate enough to be able to afford participation in the global data sphere.

Another technology with the potential to upset the dominant social and economic structures while increasing human productivity is nanotechnology. A nanometer is one-billionth of a meter, and nanotechnology is the precise manipulation of matter on the nano-scale: the molecular and atomic scale. First proposed by physicist Richard Feynman in 1959, nanotechnology is based on the premise that there is nothing in the laws of physics that would prohibit us from building machines on the molecular level from individual atoms.

Although still in a nascent stage of development, numerous products, from cosmetics to clothing to improved batteries to more efficient DNA tests, have hit the market over the last few years. Nanotechnology promises extraordinary advances in the manipulation of matter. These advances are, of course, contingent upon other, more immediate advances. Although we have learned how to move individual atoms and have created simple nanomachines, nanomotors, and primitive nanobots built from DNA, we are still a long way from creating the first fully-functioning nanobot. Although it sounds like science fiction, and some scientists are skeptical of its feasibility, the Holy Grail of nanotechnology is a self-replicating nanobot. A self-replicating nanobot would be the size of a large molecule and would not only be able to assemble more versions of itself, but, given the proper instructions, could assemble nearly anything, atom by atom, molecule by molecule, from the bottom up.

There are a number of medical benefits promised by nanotechnology including improved imaging and implants, more effective means of treating disease, repairing cells, and through cells, tissues and whole organs. Nanobots could be injected into your bloodstream and be specifically targeted to destroy cancer cells, or to repair cells that had been damaged by cancer. They could be programmed to seek out cells harboring viruses (like HIV) and disassemble them.

Nanotechnology offers the possibility of greatly increased health and longevity by maintaining and repairing our bodies at a molecular and cellular level. Nanoprobes could be deployed in our bodies to monitor medical conditions and warn patients of imminent dangers. The possible future advantages of nanotechnology for the individual are almost too good to be true.

For some people, possibly many people, they may remain too good to be true. Though nanotechnology is always framed with the notion that it would provide its services at nearly no expense, it is virtually certain that the companies who develop this technology will have invested quite a lot of money to create it, and will expect a considerable profit from its use. This may mean that certain types of nanotechnology, as seems to be the case with all technology, will only be available to those who can afford it. Like genetic engineering, it is possible that a divide may occur between those who have enhanced nano-bodies, capable of extended life, and those who live and die with what nature gave them.

Nanotechnology will radically change the way we alter the world around us. It will place in our hands powers that are almost beyond our imaginations. Not unexpectedly, there are many dangers attendant with the rise and implementation of fully-operational nanotechnology in the world. One of the founders of serious thought about nanotechnology, physicist K. Eric Drexler, optimistically cautioned regarding these dangers in his seminal book, *Engines of Creation*, that “Sloth — intellectual, moral, and physical — seems perhaps our greatest danger. We can only meet great challenges with great effort. Will enough people make enough effort? Success will not require a sudden universal enlightenment and mobilization. It will require only that a growing community of people strive to develop, publicize, and implement workable solutions — and that they have good and growing measure of success.”¹⁰²

While this path worked well for complicated technologies, it is difficult to see how we can have as much faith in it working for complex technologies, particularly ones whose immediate effects change whole systems. We are learning from genetic engineering just what is required to cope with a complex technology, and, by the estimation of many critics, we are falling far short of any measure of success. We can only assume the uphill struggle we will face with nanotechnology will be even steeper than the one we are currently fighting against with genetic engineering.

Assuming that the dreams of nanotech-optimists come true, it would be possible for us to completely recreate the physical world to our own designs by the end of the century. It would allow us to build anything with minimal energy...buildings that would last for centuries, new means of transportation, food created from base elements without plants or animals; whatever we could imagine. The nanotech-optimists paint a picture of a near-paradise on Earth, with our every need supplied by nanobots doing our bidding. Of course, there is also the possibility that during the replication process the nanobots will mutate and no longer respond to our commands. Or they might begin to communicate differently with each other, or they may simply malfunction in some fashion. One or two of these damaged bots would be no problem, but since nanobots would have to replicate in the billions and trillions to accomplish the goals we might set for them, defects could easily be passed on to future generations of bots. These rogue nanobots might then make quite a bit of trouble. The most frightening aspect of nanobots is that they can not only assemble things on a molecular level, but disassemble them as well. Thus, a plague of rouge nanobots could conceivably begin taking our world apart from the bottom up. It is also possible that nano-organisms, ones created by nanobots, could out-compete nature’s variety, thus replacing the world with plants that do not contribute to the ecosystem at all, stifling life planet-wide.

This is what is known in nanotech circles as the “grey goo” scenario, whereby the world of living things, while not necessarily turned into grey goo, is left incapable of supporting life. There are plenty of precautions we could take to ensure that this sort of situation wouldn’t arise accidentally, but the real problem is that by creating this kind of technology, we will run the risk of it being used by someone whose intentions are far from benevolent. If we are to ever implement this technology on a widespread basis, we should ensure that everyone who has access to it has

only the best intentions for its use. Not surprisingly, best intentions, as well as their results, will be tightly linked to the worldviews of those who implement the technology.

No technology, no matter how powerful, will change our lives for the better without a conscious effort to guide it toward that end. Genetically modifying our foods, livestock, and children without consideration of the full range of consequences will prove more disastrous than liberating. Simply increasing computing power and placing smart chips on everything will not give us more freedom or happiness. We will have to actively seek to mold these and other technologies to our needs — individually, locally, nationally, and globally. We can only do this if we are aware of what these technologies are, how they are advancing, and how they are being implemented. As generic engineering, computers, robotics, and nanotechnology continue to develop, we should begin thinking about their implementations in society in Integral terms, addressing the long-term consequences with equal or greater care than we apply to the consideration of short-term benefits. We need to apply a human lens, and an Integral vision, to our assessment of our technological future.

Contemplation of Future Tech

Have you thought about how technology shapes our world? What are your feelings about genetic engineering in general? What about cloning or stem cell research? Do you think we should engage in stem cell research and organ cloning? How do you feel about gene therapy? Do you feel we should use technology to change the genes of future generations? Do you think we should allow people to design their children within the limits of the technology? Do you think we should be genetically engineering the plants we use to feed the world? What do you see as the benefits of this? What do you feel are the risks?

How do you think computers and robots have changed the world in the last 50 years? Which of these changes do you see as positive and which as negative? How do you feel computers have changed your life, just in the past 10 years? How do you think computers and robots will change your life personally in the next decade? What do you think the impacts will be on social structures in the coming 20 or 30 years?

Are you concerned about robots replacing human labor? Are you concerned about computers achieving a level of artificial intelligence that would allow them to do many common human tasks? What do you think is the relationship between computers, robots, and the environment? How do you think computers will affect the economy? What about communications? What about your daily life?

How do you think nanotechnology will affect you personally? What about your children and grandchildren? What effects do you think it will have on culture in your nation and around the world? What about various social structures? How do you see it impacting medicine? What about manufacturing? What effects can you foresee for the economics of nations and the world? What dangers would you expect from this technology? What benefits do you think it will provide? What do you think are the ethical considerations of the development and use of this technology?

How do you think that your worldview informs your thinking about these different technologies?

Action: Take some time and write down all the ways you can imagine how genetic engineering, computers, robotics, and nanotechnology might change your life and the world. Don't worry if it begins to sound like science fiction; the idea is to get a gauge, not only of how much the world could change, but how you feel about it. Make sure your list includes all of the different potential advantages and dangers of each technology. Take some time to go over your list. How

do you feel about these technological transformations? Are you depicting a world you think will be better to live in? Which changes on your list make you feel ethically uneasy?

Inner Knowledge

Spiritual Transformation

“When appearances and names are put away and all discrimination ceases, that which remains is the true and essential nature of things and, as nothing can be predicated as to the nature of essence, it is called the ‘Suchness’ of Reality. This universal, undifferentiated, inscrutable Suchness is the only Reality...and when all things are understood in full agreement with it, one is in possession of Perfect Knowledge.”

Buddhist *Lankavatara Sutra* 83

“Beyond the sense is the mind, beyond the mind is the intellect, higher than the intellect is the Great Atman, higher than the Great Atman is the Unmanifest. Beyond the Unmanifest is the Purusha, all-pervading, and imperceptible.”

Katha Upanishad, 2.3.7-8

“Divinity is that which was there before the appearance of heaven and earth, and which gives form to them; that which surpasses the yin and the yang, yet has the quality of them. This Divinity is thus the absolute existence, governing the entire universe of heaven and earth, yet at the same time, it dwells within all things, where it is called spirit; omnipresent within human beings, it is called mind...Itself without form, it is Divinity which nurtures things with form.”

Shinto, Kanetomo Yoshida, *An Outline of Shinto*, quoted from *World Scripture*, (The International Religious Foundation), p. 62

We must transcend our current, narrower worldviews for deeper ways of knowing if we are to have any hope of avoiding the various dangers that our current ways of perceiving are creating in the world. However, even if we are able to supplant the Postmodern, Modern, and Traditional worldviews with an Integral worldview, both on individual and collective levels, we will still have Spiritual worldviews waiting to be discovered and passed into.

Spirituality can be thought of as the paths and practices that lead to spiritual realizations and a Spiritual worldview. Patient spiritual practice transforms our minds. Prayer, meditation, study, service, contemplation, and other practices lead us to a gradual transcendence of the sense of a separate ego-self standing apart from the world. We begin to see others and the world as ourselves, as a unified and interdependent manifestation of the Divine — the indivisible wholeness that is the entire cosmos. This engenders greater compassion, universal love, patience, generosity, gratitude, and forgiveness, among other qualities. The deeper our practice, the deeper our realizations, and the deeper our spiritual worldview becomes.

The field of study that examines the spiritual states of consciousness and stages of development is called transpersonal psychology. The Spiritual worldviews, or stages of development, are the ultimate reaches of our human potential, and only by becoming aware of them and studying them we can eventually attain them. Roger Walsh and Frances Vaughan explain it succinctly in their introductory text, *Paths Beyond Ego*:¹⁰³

“Transpersonal experiences may be defined as experiences in which the sense of identity or self extends beyond (trans) the individual or personal to encompass wider aspects of humankind, life, psyche, and cosmos. Transpersonal disciplines study transpersonal experiences and related phenomena. Practitioners seek to expand the scope of their disciplines

to include the study of transpersonal phenomena and to bring their particular disciplinary expertise to this study. Transpersonal Psychology is the psychological study of transpersonal experiences and their correlates. These correlates include the nature, varieties, causes, and effects of transpersonal experiences and development as well as the psychologies, philosophies, disciplines, arts, cultures, life-styles, reactions, and religions that are inspired by them, or that seek to induce, express, apply, or understand them.”

Integral philosopher Ken Wilber has accomplished another, more extensive, systematic mapping of worldviews than we have explored thus far. Synthesizing Western and Eastern philosophy, developmental psychology, cultural anthropology, evolutionary theory, systems theory, and the mystic writings of the world’s great wisdom traditions, Wilber has managed to create a holistic map of inner reality. With this map, he has successfully included the truths, but not the errors (or so he hopes), of many of the modes of understanding humanity has created. The most important aspect of Wilber’s work, in my opinion, is that he has managed to convincingly explore the stages of transpersonal development that succeed the primarily personal stages. These are the Spiritual stages of development described by mystics of all persuasions.

Wilber is not the only researcher to investigate the Spiritual or transpersonal stages of development. Beginning with William James, there is a long line of psychologists and philosophers who have explored the further reaches of human nature. These include, in no particular order, Richard Maurice Bucke, Evelyn Underhill, Aldous Huxley, Stanislav Grof, Michael Washburn, Jenny Wade, Roger Walsh, Frances Vaughan, and Sri Aurobindo. However, as much as I respect and admire the work of all these individuals, it is precisely because Wilber attempts to integrate all of them into his system that I believe it is not only the most comprehensive, but the one best suited for discussing the spiritual stages of development.

Wilber’s transpersonal spectrum of consciousness adds four distinct stages to the other systems of personal development, which he also incorporates into his system. Briefly, the first is the *Psychic* level, or nature mysticism, where the unity with all living things is perceived and lived. The next level is the *Subtle*, or deity mysticism, where one experiences unity with one’s primal archetypes, or one’s personal god. A near-death experience is one example of this, but a sustained realization at this level often includes experiences of interior illuminations and a deep unity with not just all life (or the gross level) but the actual mechanisms that support life, the subtle forms, or the laws of the universe, if you will.

The third stage is the *Causal*; unity with the Witness, and the emptiness, or void, from which all arises. This stage is what is generally considered enlightenment, but there is a final stage: the *Nondual*, or Unity Consciousness stage, in which identification with even the Witness, the void, with emptiness, is transcended and there is simply unity, simply Spirit. There is no subject and no object, there is simply Oneness. Spirit as Spirit. (*For those interested in more information on the stages of spiritual development see [Appendix IV.](#)*)

Wilber’s transpersonal stages of consciousness are based on a cross-cultural study of the world’s mystic traditions as well as modern consciousness research. While there are many scientists attempting to explain the spiritual experience as a neurological event, trying to pinpoint a “God Module” within the brain, these conjectures miss the point.¹⁰⁴ All experiences are neurological events that we experience neurologically. It is not surprising that a long-term practitioner of meditation will display a significantly different EEG pattern, or that areas of the brain not normally used will be highlighted in an MRI scan. Meditation is not altering consciousness; it is altering the experience of consciousness. Just as a 5-year-old’s experience of

consciousness is not as developed or deep as a teenager's or an adult's, just so, the average person's experience of consciousness is not generally as developed as that of a longtime practitioner of meditation.

For several thousand years, the world's mystic traditions have all been teaching a very similar program of spiritual realization, regardless of how different their religious and mythological and theological teachings might be. This is the *perennial philosophy*, and its continued effectiveness at revealing deeper ways of knowing is what the transpersonal, or spiritual stages of development, are based on. Wilber makes it clear that he believes each of the stages of development, personal as well as transpersonal, are potentially available to every person, and by extension, every society.

There is a strong correlation between the stages of personal and spiritual development and the stages of sociocultural development. Humans pass through individual stages of development, and as societies, we seem to pass through these very same stages played out on a larger fashion. Just as each worldview on the personal level successively embraces a wider perspective, a deeper understanding of the universe, so too do the larger stages societies move through. (*For more information in the stages of sociocultural development see [Appendix II.](#)*)

It is important to note that each successive stage does not abandon the worldview of the previous stage but instead transcends it, leaving the individual, or the society, with a successively wider perspective. Different individuals will always be at different stages throughout a society, as the work of Ray and Anderson illustrates, but, at most times, a single worldview will dominate. Currently, our Western society is dominated by the Modern worldview, which often tends to have a low regard for the very notion of religion, much less the idea of a transcendent spirituality. As our society evolves over time, this situation will hopefully change in significant ways.

The Perennial Philosophy

By looking at the collective history of the human encounter with the Divine, we can gain an insight into depths of knowing that are potentially available to us individually and collectively. A few words from different sages are a good place to start:

“God is unified oneness — one without two, inestimable. Genuine divine existence engenders the existence of all of creation. The sublime, inner essences secretly constitute a chain linking everything from the highest to the lowest, extending from the upper pool to the edge of the universe. There is nothing — not even the tiniest thing — that is not fastened to the links of this chain. Everything is catenated in its mystery, caught in its oneness. God is one, God’s secret is one, all the worlds below and above are all mysteriously one. Divine existence is indivisible.”

Moses de Leon, *Sefer Ha-Rimmon*, quoted from *The Essential Kabbalah*, by Daniel C. Matt, p. 26

“We look at it and do not see it;
Its name is The Invisible.
We listen to it and do not hear it;
Its name is The Inaudible.
We touch it and do not find it;
Its name is The Subtle.
These three cannot be further inquired into,
And hence merge into one.
Going up high it is not bright, and coming down low, it is not dark,
Infinite and boundless, it cannot be given any name;
It reverts to nothingness.”

Lao Tzu, *Tao Te Ching*, Ch. 14

“Thou art the fire
Thou art the sun
Thou art the air
Thou art the moon
Thou art the starry firmament
Thou art Brahman Supreme;
Thou art the waters — Thou, the Creator of all!
Thou art woman, thou art man,
Thou art the youth, thou art the maiden,
Thou art the old man tottering with his staff;
Thou facest everywhere.
You are the dark blue butterfly,
You are the green parrot with red eyes,
You are the thunder-cloud, the seasons, the seas.
You are without beginning,
You pervade all things,

and from you all things were born.”
Svetasvatara Upanishad, 4.2-4

Much of the historical evidence supporting the idea of transpersonal stages of development rests on the *perennial philosophy*, a term coined by mathematician and philosopher Gottfried Leibniz, and later made famous by Aldous Huxley in his book of the same name. Huxley describes the perennial philosophy as “...the thing — the metaphysic that recognizes a divine reality substantial to the world of things and lives and minds; the psychology that finds in the soul something similar to, or even identical with, divine reality; the ethic that places man’s final end in the knowledge of the immanent and transcendent Ground of all Being...”¹⁰⁵ The perennial philosophy finds that all of the world’s wisdom traditions, the mystics teachings of the world’s great religions, are in general accord with one another.

This is not to say that they agree at every point. However, they all espouse a contemplative tradition, a path or set of practices that, if followed closely, will eventually reveal to the practitioner a unique, Spiritual view of reality. Ken Wilber points out that the founders of the world’s wisdom traditions “...almost without exception, underwent a series of profound spiritual experiences. Their revelations, their direct spiritual experiences, were not mythological proclamations...but rather direct apprehensions of the Divine (Spirit, Emptiness, Deity, The Absolute).”¹⁰⁶

Each person’s experience of the Divine is interpreted through their own cultural and social frameworks, giving rise to a number of traditions around the world that, while explaining the same or similar deep experience, do so in sometimes very different ways. For instance, the Jewish mysticism of Kabbalah does not proceed in the same manner, nor do its mystics explain their experiences in exactly the same fashion as Christian mystics, or the Sufi mystics of Islam, even though they are all worshipping the same God and describing the same vision of union in that God as Godhead. However, even though their reports are not identical, these visions of the Divine are similar enough, and in great enough accord with the mystics of Buddhism, Taoism, and Hinduism, among others, that we can clearly see their relations and relative truths. They are all describing the same vision of the ultimate nature of reality from different backgrounds and different depths.

These slightly divergent messages are only to be expected. Six reviewers can see the same film each and enjoy it immensely, but each take different things from it. Reading these reviews, one would understand that they all saw the same film but they each understood it differently. The writings of the world’s mystics are much the same, and nothing helps to support an understanding and acceptance of the perennial philosophy like reading the great texts of the world’s wisdom traditions. There are a number of wonderful anthologies and serious studies, many of which are listed in the [suggested reading list](#), but I highly recommend *The Perennial Philosophy* by Aldous Huxley, *The Essential Mystics* by Andrew Harvey, and *The Enlightened Mind* by Stephen Mitchell. The perennial philosophy helps us understand that spiritual insight is both universal and universally available to all of us, whatever our religious or cultural background.

Of course, there are a number of researchers who disagree with this proposition of a perennial philosophy, but, by and large, they make the dysfunctional postmodern mistake of granting all spiritual insight an equivalent depth of meaning. Thus, rather than accept the idea of various stages of transpersonal or spiritual development, which only seems natural and expected in light of the widely accepted stages of personal development, they suggest all spiritual development, while of different cultural value, is of equivalent depth.

This disdain for hierarchy within spiritual pursuit is understandable, but in an attempt to give value to everyone’s spiritual experience, they undervalue spiritual experience of greater depth and

insight. There is no problem in ranking, in a general fashion, the depth of spiritual experiences, as this is a common feature within individual spiritual traditions. For instance, within every school of Buddhism one finds clearly delineated levels of spiritual realizations. These exist not to separate people and create divisiveness or pathological hierarchy, but to help the individual spiritual aspirant in their journey.¹⁰⁷

Religion vs. Science vs. Spirituality: A Dialogue

The following brief imaginary, and hopefully humorous, dialogue is intended to explore the relationship between Science, Religion, and Spirituality.

Science: You are simply mythology, nothing more and nothing less. Stories told in ancient times for ancient minds.

Religion: Well, by all means, let's jump right into the discussion. I prefer to think that I am the bedrock of civilization. You, on the other hand, are merely a means of knowing and manipulating the physical world. You can't offer answers to the real questions that I address.

Science: I have explained away all the myths you imagined to understand the world. I have explained how the universe was created, how life came to be, how humans arose, and how they have evolved over time.

Religion: You have only discovered *some* of the mechanisms for how things happened. You still haven't explained why. You say the universe began with the Big Bang, but you can't tell us why.

Science: In time, I'm sure I will figure it out.

Religion: Even if you do, you don't have anything to say about life, as humans live it.

Science: I think I've had a great deal to say through neurology, psychology, and sociology.

Religion: Again, you're just watching and making guesses. You can't speak from authority.

Science: What possible authority can you speak from?

Religion: I speak with the authority of God.

Science: What God? Which one? You have so many religions, so many gods, and so many stories. They can't all be right. The Christian God is not the same as the Hindu gods, or the same as the Zoroastrian god. And Buddhism doesn't even have a creator god.

Religion: Each religion speaks with its own authority.

Science: Then how can religion be universal? You're admitting limits to your knowledge.

Spirituality: May I interject?

Science: Not if you're going to start in with that stuff about a perennial philosophy and a Great Chain of Being.

Religion: What do you have against those?

Science: First, the Great Chain of Being is based on faulty logic. Sure, you have matter giving rise to life and life giving rise to mind, but you can't just extrapolate mind giving rise to soul and Spirit. You can see matter and life, and you can observe minds, but you can't see Spirit.

Spirituality: Exactly. Soul is an interior experience. And Spirit can only be experienced internally, as well.

Science: Then how can you prove it?

Religion: You don't need to prove it.

Spirituality: Well, I disagree with Religion there. You prove it by experiencing it. How do you prove that you are dreaming? Or that you are thinking about something?

Science: With an EEG of your brainwave patterns, or an MRI.

Spirituality: And you can get an EEG or an MRI of your brain when in deep, ecstatic meditation.

Science: Which proves that it's all in your head. Just like dreams.

Spirituality: No, it's all in your head, period. Your experiences are always all in your head. Dreams are a good example, because even if you can see someone is dreaming, you can't tell what

they are dreaming. You have to rely on them to describe to you that interior experience. But you also have to rely on them to describe the way they perceive any experience while awake, as well. And a change in brainwave patterns only shows that all experience is interpreted through our minds.

Science: If I see a tree and you see a tree, we both see a tree.

Spirituality: Yes, but we both perceive the tree differently.

Science: But I can describe the tree in scientific terms with accuracy. In terms that are not dependent on internal experience.

Spirituality: However you describe it, you have to interpret it internally. That is why two scientists can look at the same data and reach different conclusions.

Science: You're talking about human fallibility.

Religion: That's the fallibility of Science.

Spirituality: Fallibility is a good point. Karl Popper suggested that for a scientific principle to be held as accurate, it must continue to be proven "not wrong." It is never accepted as gospel, so to speak, but held in a suspension of fallibility, constantly checking it against the facts.

Science: Which is something Religion can't do. Your facts contradict themselves. Which proves them wrong.

Religion: You might make me concede that I'm wrong about how the universe began, or about evolution, but you can't prove that there isn't a God.

Science: And you can't prove that there is. Fallibility means that your proof must be consistently positive, and yet you haven't been able to muster a single positive proof for the existence of any God.

Religion: I don't have to prove God. That's what faith is about.

Science: I can't accept faith as a way of engaging the universe. Fallibility means that I can't have faith in anything. It is all provisional. However accurate my theories may be, they might change in the face of new evidence. Newton thought he had the universe licked, then Einstein changed everything, and now String Theory may change it again. So, if I can't have absolute faith in something I can see and measure, how can I have faith in something I can't see?

Spirituality: You can't have absolute faith in it, but you can see it.

Science: Where? How?

Spirituality: Internally, through meditation.

Science: Back to the internal.

Spirituality: And back to the perennial philosophy.

Science: How can you have a perennial philosophy when the religions don't agree?

Spirituality: The religions don't agree on the myths and rules and dogmas, but the mystics are in general agreement on the ultimate nature of reality. It's impossible to reconcile theology between religions, but it is possible to reconcile the realizations of the world's wisdom traditions.

Religion: I'm not sure. I don't think Christian mystics aren't saying the same thing as Buddhists.

Spirituality: They are both revealing a different perception of reality obtained through contemplation and meditation. And a close study of the world's mystic traditions shows that they unfold in deeper and deeper layers, each influenced by social, cultural, personal, and physical factors.

Science: It doesn't matter. It's all in their heads. The meditation changes the structure of their brains in ways that create the experiences.

Spirituality: The meditation does seem to change our brains...not in ways that create experience, but in ways that change our perceptions of experience. The same things happen as we grow from babies to adults. Our brains change, and with them, our perceptions of the world. Mystics are doing something similar.

Science: But it doesn't prove there is a God.

Spirituality: It doesn't prove a creator, a single being or entity that is all-knowing and all-powerful, no.

Science: So...no God, no Religion.

Spirituality: No, you still have Religion, you just don't have the myths or dogma. Mystics throughout the ages have been reporting a similar, deepening view of reality through meditation. Ultimately they reveal a nondual perception of the universe, of the universe as Divine, as Oneness, as Spirit, Emptiness, Brahman, the Ground of All Being, One Without a Second — there are many names.

Religion: Names for God.

Spirituality: You can call the ultimate nature of reality Spirit or God if you wish, but you can't personify it, because it is beyond personality. That's the whole point of transcending the individual ego-self through meditation. You transcend your ego-self and sense of separateness for a perception of Oneness to see Spirit as the Ground of All Being. It wouldn't make any sense to then find another ego-self written large over the universe.

Science: Again, it's all in their heads.

Spirituality: Think of it as a giant, long-running experiment. Over a period of at least 2,500 years people have been meditating, and when adjusted for cultural differences and depth of experience, they all seem to be reporting similar changes in their perception of the nature of reality. And this experience, over time, tends to result in the practitioner perceiving conventional reality, which we commonly see as separate things, as manifesting forth from an ultimate reality, which is a unified wholeness, whether it's called the Divine, Oneness, Spirit, Emptiness, Brahman, or Godhead.

Science: But where's the control?

Spirituality: It's built in. The control is all the people who haven't been meditating.

Science: So, I'm just supposed to accept what these meditators say?

Spirituality: No. You can try it yourself. Like a good scientist.

Science: What about Religion?

Spirituality: Religion needs to try it as well.

Religion: Mysticism is for special people. For saints and sages. It isn't for everyone.

Spirituality: No, it is for everyone. That's the whole point behind Buddhism. It's a religion, based on mysticism.

Science: Look, even if I try this meditation and it changes the way I perceive the universe, that still doesn't change the fact that Religion can't describe the universe the way I can. And if that new interior perception runs counter to my exterior measurements, I have to trust the objective observations and assume my interior perception is faulty.

Spirituality: That's true. However, the mystic perception of the Divine or Emptiness or Oneness, does not contradict any scientific theories of reality. And contrary to what some New Age spiritualists might claim, there is no need to try and prove mystic perceptions with interpretations of Quantum Theory or other theories of physics.

Science: An interior perception must be able to accurately describe and predict exterior reality in order to be considered valid. You have to be able to confirm that perception through objective

observation. A mystic and a scientist can both perceive a phenomenon, like a comet, but the scientist's observations and mathematical equations can predict the comet's path.

Spirituality: That's also true. However, as I said, there is nothing about the nondual mystic perception of Oneness, of *ultimate truth*, that contradicts the scientific observational view of *conventional truth*. This perception of Oneness does not imply that there is anything wrong with the conventional view of reality, it merely suggests that it is limited, similar to the way, as you pointed out, that Einstein's Theory of Relativity showed the limitations of Newtonian physics. The mystic appreciates that the scientist can predict the location of a comet a hundred years from now, because a perception of Oneness will not convey that knowledge. What that perception of Oneness will convey is a knowledge that the comet, the scientist, the mystic, and everything else in the cosmos, are not merely individual things interacting like balls on a billiard table, simply behaving in ways determined by the forces of nature, but are actually manifestations of an omnipresent interdependence — not a multitude of separate things, but countless aspects of a single, unified reality.

Science: You're suggesting that mysticism, a perception of Oneness or Emptiness, is just another paradigm with which to view the universe.

Spirituality: It's more than merely a paradigm, or a set of conceptual frameworks for viewing reality, it is a worldview, a perceptual manner of experiencing reality. You can think of it through Ken Wilber's Four Quadrants of Being. You can have an interior perception of an interior event, (thinking about a comet). Or an interior perception of an exterior event (looking at a comet). You can also have an exterior observation of an interior event (an EEG of a brain watching a comet), as well as an exterior observation of exterior event (telescopic observation of a comet's trajectory). What's important to remember is that while Science can objectively observe the last three, it must rely on intersubjective communication to relate the interior perception of an interior event. I have to tell you what I think about a comet. And while you can scan my brain while I'm looking at the comet, I still have to tell you what I perceive of that comet. And if my perception of the comet as a manifestation of Oneness (*Ultimate Reality*) is not invalidated by any observational evidence, it must be considered as just as provisionally valid as your perception of the comet as an inherently separate object in a universe of inherently separate objects (*Conventional Reality*). The point is that both perceptions can be valid, however that the perception of Ultimate Reality encompasses and transcends the perception of Conventional Reality.

Science: But you have to meditate to experience that perception?

Spirituality: In general, yes. While there are plenty of mystic treatises on the nature of reality, these can only provide an intellectual understanding of the subject. Just as we need to train the mind to see the world from a scientific perspective, we need to train to see it from a mystic perspective. *Spiritual science*...

Science: There's no such thing.

Spirituality: But there can be. If you think of a Spiritual worldview the same way you think of other worldviews, it will make sense. A scientist researching a phenomenon from a mystic or spiritual perspective of Oneness, rather than a reductive perception of separateness, will proceed in ways that may engender new insights and realizations about how the universe works. These discoveries will still need to be verified by empirical testing, but their success or failure will no more invalidate the mystic perspective than a failed experiment invalidates the traditional, reductive perspective.

Religion: Are we still talking about Religion? I'm bored. I'm getting sleepy with all this talk about reality and observations and proving things.

Science: Actually, this is where you come in. A *spiritual religion*, the counter point to a *spiritual science*, could inform its teachings with collective spiritual realization of the various wisdom traditions instead of myths and dogma. You could base your morality more on the spiritual awareness of interdependence rather than myth or tradition rooted in scriptural rules. And you could focus more on the paths and practices that encourage patience, love, universal compassion, and inner peace.

Religion: So, you're saying that Religion, like Science, needs to be based on direct experience. If that direct experience agrees with science but not with scripture, then we have to change the scripture, or view it metaphorically. And if that direct experience reveals a sense of the numinous, we need to acknowledge that this experience is available to everyone.

Spirituality: Exactly.

Religion: Then what is my role outside of mysticism?

Spirituality: The same as before, only now your authority comes from the individual's direct experience.

Religion: So the traditions that disagree on cosmology and mythology can agree on you, on Spirituality?

Spirituality: They can, but they don't have to be in total accord. The variety that you offer is one of your strengths.

Science: All of this is fine and dandy for Religion, but what about me? How am I supposed to accept a direct experience of the numinous, of Spirit as the Ground of all Being, of something I can't measure if I can't describe it in the terms of math and equations?

Spirituality: Well, you can measure your own experience and compare it to people who are also engaged in the experiment. As for math, what you're really talking about is faith and belief.

Science: Right. I can believe in math. I can believe the theories it proves, but how can I have faith in you, or Religion?

Spirituality: Faith and belief are intertwined. Basically, there are four types of belief: *The first is based on desire.* You believe something because you want to, regardless of what facts or counter-arguments might be presented to you. *The second is based on faith.* We believe something because it is presented to us by someone we trust. Whether it's God, or Spirit, or quantum theory, if we believe it on the basis of someone else's authority, then it's faith. While it can be problematic, there is nothing necessarily wrong with that. I don't have the math to understand quantum mechanics, so I have to take your word for it. *The third kind of belief is based on supposition,* or hypothesis, derived from observation. You look at the world and see a pattern, and from that you extrapolate a supposition about something...and your belief rests on that chain of logic. Your belief in the effectiveness of meditation could be based on the fact that it seems to have produced similar results, repeatedly, throughout history. *The fourth kind of belief is based on direct experience,* upon knowledge gained through the senses — by performing experiments to test the supposition. My belief in the realities revealed by prolonged meditation is based on engaging in a daily practice. Your belief in the realities of quantum physics is based on learning the math, performing the equations, and trying the experiments that prove it.

Religion: Since you're explaining faith, what about prayer? What about faith and service in God?

Spirituality: Look, you can still pray to God, or the Goddess, or as many gods as you choose, but if you are immersed in a practice of transcending the ego-self, of stepping beyond separateness, beyond personhood, toward a perception of Oneness, then you will eventually move on to worshipping Godhead, rather than God or Goddess, as you begin to see everyone, everything, not

as some separate entity outside of you, but as expressing a different aspect of the same ultimate nature. Worship of a God or Goddess can be a very important stage along the path. You don't need to throw it out, you merely need to see it as a practice of transcendence.

Religion: None of this is going to be an easy sell to my friends.

Science: Your friends will be more open than mine.

Spirituality: It won't be an easy sell, and it will take quite a bit of time, but it is possible. Going back to Einstein, when he came up with the Theory of Relativity, physicists didn't immediately embrace what he was saying. Many of them continued to cling to a Newtonian view of the universe, and many clung even more tightly to it when Heisenberg came along and started making noises about his Uncertainty Principle. The same will happen again, and it will be even more difficult for Religion. But fortunately, the nature of Religion is to shift and change over time. What we really need are leaders who are willing to push for change.

Science: So, I guess there's a lot of work cut out for us.

Religion: Decades', even centuries', worth.

Spirituality: Yes, but the whole point is that we do not need to do it alone. We all can, and should, work together. Our futures depend on it.

Where Science and Religion Can Be Compatible

Physicist Sean Carroll wrote recently that “The reason why science and religion are actually incompatible is that, in the real world, they reach incompatible conclusions. It’s worth noting that this incompatibility is perfectly evident to any fair-minded person who cares to look. Different religions make very different claims, but they typically end up saying things like ‘God made the universe in six days’ or ‘Jesus died and was resurrected’ or ‘Moses parted the Red Sea’ or ‘dead souls are reincarnated in accordance with their karmic burden.’ And science says: none of that is true. So there you go, incompatibility.”¹⁰⁸

While I agree with everything Carroll wrote, I disagree with his conclusion. He and most others conceptualize Religion (capital R) as being a whole thing rather than being made up of several constituent aspects, some of which, I believe, are compatible with Science (capital S). Religion can be subdivided into the aspects of *Mythology*, *Theology*, *Ritual*, *Ethics*, *Spirituality*, and *Mysticism*, some of which are compatible, at different levels, with Science.

Mythology is the stories that a particular religion tells about the world and its founders. If these stories have no historical or provable component, they require Faith (yes, with a capital F). The Mythology of Religion is not compatible with Science. Science requires proof for belief and remains willing to change its mind. Mythology must be taken on faith.

Theology is the way the myths are interpreted, and how doctrine is explained and defined over time. Theology changes, but myths do not. Here, as with Mythology, there can be little compatibility with Science. Theology generally seeks to reinforce the founding beliefs espoused by Mythology and give them legitimacy through philosophical rationalization rather than empirical evidence. One proves the existence of a supreme being that created the universe with Theology but not with Science (unless some better evidence to the contrary arises at some point).

Ritual is the way a religion is expressed in practice — the liturgy, prayers, and practices that comprise the collective and individual worship. That final word — worship — is the key indicator that Ritual is not compatible with Science. There simply isn’t any overlap between Ritual and Science, unless it is in the anthropological study of religious ritual.

Ethics, the moral values and injunctions that a religion promulgates, are usually thought of as the purview of philosophy, but I think Science can study ethics. Certainly, psychologists study the ethical development of humans, and sociologists and anthropologists can study the ethical behaviors of different societies around the world and throughout history. While these fields are not what are typically thought of as “hard” science, they all make use of the scientific method to establish facts about the human world.

Spirituality, the intentional cultivation of peaceful states of mind (like love, compassion, patience, and equanimity), is another aspect of Religion that can be compatible with Science — in particular, psychology. Psychologists can and do study different states of mind, the means for achieving them, and their effects on individuals and communities.

Lastly, *Mysticism*, by which I mean the meditative practices for achieving deep states of conscious awareness in which perceptions about the nature of reality are heightened or expanded, can be an aspect of Religion that is compatible with Science. Neurologists can study the way these states of mind impact, and are impacted by, the brain. Mysticism is an inner mental practice of examining the Ultimate Nature of Reality, an area Science leaves to math and physics. The mystic perception of the Ultimate Nature of Reality could provide a useful perspective for mathematicians and physicists to explore the universe through Science.

While psychologists and neuroscientists can examine the brains of meditators who are claiming to have a heightened perception of reality, but this does not prove that this perception — of the nondual nature of reality espoused by Buddhists (Emptiness), Hindus (Brahman), or Jewish, Christian, and Muslim mystics (Godhead) — is accurate and factual. We can argue that our normal perceptions are “proven” by collective agreement, i.e. if enough people say the sky is blue, it is likely to be blue. A similar claim is made by interspiritual mystics — if thousands of people have performed the same experiment (meditation) and obtained a similar result (a nondual perception of reality), then this perception can be taken as at least a provisionally accurate description of the full nature of reality. Proving this perception through the science of physics is a more complicated matter.

Ken Wilber has cautioned against hitching one’s mysticism to physics because, as the physics of the day changes, one must either readjust one’s mysticism to match, or give up the association. New Age seekers have spent decades pointing to the “non-intuitive conclusions of quantum physics,” (to borrow a phrase from Carroll’s original article), to suggest that mystical perceptions of reality are, in fact, scientifically founded. However, even if this were an accurate interpretation of Quantum Theory (and I don’t believe it is), mystics would need to accommodate String Theory, or some future model of physics, that might one day upend their mystic realizations.

This doesn’t mean that we should not use Science to investigate Mysticism. While it does not make sense to try and match up mystic perceptions of the “Ultimate Nature of Reality” with handpicked theories from physics, it also doesn’t make sense to wall off Mysticism and Science. Science and Mysticism are compatible because Science can explore, in both mathematical and experimental manners, the perceptions that are presented by Mysticism. In the same way that Science can look at the wavelength of the light reflecting from the sky and tell us that it is what we typically label the color ‘blue,’ Science can also examine the claims about the nondual nature of reality to determine if it is merely a perceptual bias (seeing what we expect to see) generated by slowly altering the neural connections of the human brain, or if it has a basis in fact and is an accurate description of the universe.¹⁰⁹

It is more useful to think of Mysticism as providing a deeper perspective from which to view reality, rather than a set of truth claims about reality. The modern scientific perspective, which only began to come into prominence for a small number of people during the Western Renaissance and Enlightenment, does not provide truth claims about reality, but rather it presents a deeper way of viewing reality than mythic perspective that preceded it. Truth claims about reality result from applying the scientific method from a scientific perspective. Likewise, new truth claims about reality may emerge by applying the scientific method from a mystic perspective.

Although it is not strictly an aspect of Religion, I would also add the additional area of the *Supernatural* to the list of subjects that might be shared with Science. Science tends to disregard any “supernatural” phenomenon as errors in perception with no basis in fact or reality. Whether it is ghosts or precognition or telepathy, the presumption is that these are artifacts of coincidence or imaginative minds.

Simply because a phenomenon is non-repeatable, does not mean it did not take place. In fact, I tend to think of most supernatural phenomena as *non-repeatable unique expressions of reality*. In other words, we may not have the science to explain something that has happened, and a perceived event may not be entirely a product of the perceiver’s imagination and perceptual bias. I have personally had several experiences that defy any explanation by physics as we understand it now. However, I do not attempt to reach conclusions about these events, or foist upon them some pseudo-scientific explanation, because doing so doesn’t help me find the truth of what I

experienced. Seeking the truth of such non-repeatable unique expressions of reality should be done with a scientific approach involving investigation, hypothesis, and experiment.

So, while some aspects of Religion are not compatible with Science (Mythology, Theology, and Ritual), I believe others are (Ethics, Spirituality, Mysticism, and potentially the Supernatural). By recognizing the areas where Science and Religion are compatible, it may be possible to begin a productive dialogue between scientists and religious leaders that might provide greater illumination of both fields.

Integral Spirituality

“Almost everyone who undertakes a true spiritual path will discover that a profound personal healing is a necessary part of his or her spiritual process. When this need is acknowledged, spiritual practice can be directed to bring such healing to body, heart, and mind. This is not a new notion. Since ancient times, spiritual practice has been described as a process of healing. The Buddha and Jesus were both known as healers of the body, as well as great physicians of the spirit.”

Jack Kornfield, *A Path with Heart*, p. 40

An Integral spiritual path is one that acknowledges our need for transformation at all levels of our being — body, mind, soul, and spirit. Unfortunately few religions provide a deeply integral path. In the West, many spiritual aspirants are left to their own initiatives when it comes to engaging in an integral spiritual path. This leads to mixing and matching among various traditions in an attempt to create a custom path. While this is admirable, it can be detrimental if the assemblage of practices is not well coordinated. It can also be problematic if the practices, particularly the more spiritual, are haphazardly practiced. The spiritual practices of many wisdom traditions are intentionally arranged to benefit the practitioner’s ongoing transformation. Like training the body, the most difficult exercises are left for when the student has gained sufficient experience, endurance, and insight.

An excellent contemporary resource for spiritual seekers is the book *Integral Life Practice: A 21st-Century Blueprint for Physical Health, Emotional Balance, Mental Clarity, and Spiritual Awakening* by Ken Wilber, Terry Patten, Adam Leonard, and Marco Morelli. Its longwinded title is an accurate description of the very easy to understand and practical Integral program it sets forth. The authors outline a daily practice that can be followed with relative ease by the average person and which has no religious bias.

In general, an Integral path will involve practices engaging the following aspects of our lives:

Body: The general health and physical well-being of the body. Regular exercise, a healthy diet, and a greater awareness of all of the body’s functions and ways of being.

Energy: Call it Chi, or Prana, or bio-electro-magnetic fields, but there is an energy that flows through the body. We cannot only become more aware of it, but we can learn to harness it for the general health of our body and mind, as well as for spiritual transformation.

Instinctive Mind: This level of our mind requires greater awareness as it can govern our initial reactions in all manner of circumstances. Awareness of our instincts can help us understand and harness them.

Emotional Mind (The Heart): Our emotional lives are amazingly rich and complex, yet few of us take the time to investigate them. Practice at this level consists of looking deeply at our emotional lives. This can take the form of traditional therapy, or it can be found in a daily journal where we ask ourselves the very difficult questions we rarely want to answer.

Intellectual Mind (Ego-self): This level of practice involves examination not simply of our emotional selves, but of our whole ego-self. It revolves around contemplation and meditation on the nature of our minds, of why we think and behave the way we do. This investigation is informed by diligent study of spiritual texts concerning the whole of the spiritual path. The ultimate aim of these practices is to reveal the illusion of separateness created by the ego-self.

The Soul (True-Self): These practices begin to reveal through direct meditative experience the true nature of the ego-self and slowly, the true nature of reality. The practices revolve around

meditation on the True-Self, the I that is beyond I, also known as Witness, or Atman, or the Clear Light Mind.

Spirit (The Ground of All Being): These meditative practices focus on direct experience of Emptiness, or the nondual experience of the universe as Oneness, of Spirit as the Ground of All Being.

Relationships: Relationships are important throughout our lives and no less so when on a spiritual path. As we deepen our spiritual practice, everyone in our lives, indeed everyone we meet, becomes our spiritual guide in some fashion or another.

Teacher: A qualified and compassionate spiritual guide is indispensable to an Integral path. We need the experience and wisdom of someone who has been on the path to help steer us through obstacles and toward deeper realizations.

Community: A community of fellow spiritual practitioners can be invaluable as we transverse the spiritual landscape. While friends and family can be excellent teachers, even if they are not engaged in the path, our spiritual community provides essential support and guidance on a regular basis.

Personally, I believe that the best Integral path is often explored from within an existing tradition while making use of other traditions' teachings and practices, and taking advantage of modern depth psychology.

For instance, a Christian might go back and begin reading the classic texts of Christian mystics, such as the *Dark Night of the Soul* by St. John of the Cross, Walter Hilton's *The Stairway of Perfection*, the anonymous *The Cloud of Unknowing*, and the writings of St. Teresa of Avila, Julian of Norwich, and Meister Eckhart, among others. She could study the Orthodox tradition of *Theosis*, or union with God. She could then combine this with a daily meditative practice, possibly focusing on the famous Jesus prayer, "Lord Jesus Christ, Son of God, have mercy on me, a sinner." Or she could follow the meditative practice of scriptural reflection of Benedictine monks known as *lectio divina*, in which one reads a short piece of scripture, meditates on its meaning, prays for grace and guidance, and then contemplates the realizations that have arisen.

She could also focus on saying blessings for humanity, or prayers for an end to the suffering of others. She might find it helpful to read and engage in the exercises and meditations found in *A Course in Miracles*. She might then continue her spiritual practice by exploring other religious teachings, such as Buddhism and Hinduism, and taking practices from them that she felt comfortable with. Added to this might be a regular practice of psychological integration, of therapy or some introspective practice. She could then round out her path by maintaining a healthy diet and a daily regimen of exercise for her body. Of course, it would also be recommended that she find a teacher of some sort to help guide her, and some manner of community that she could take solace in.

Obviously such an Integral path, with clearly mystical or spiritual practices, isn't what is being offered in most churches in the West. If we are to have any hope of a real spiritual revival, this will need to change. While we can create a religious revival by returning to the scripture, we cannot create a spiritual revival without putting scripture into practice. Jew, Christian, and Muslim alike must recapture their lost and maligned mystic heritages and revitalize them in order to foster a true spiritual revitalization. Mysticism, the personal experience of the Divine, is at the heart of spirituality, and must be rescued from its current obscurity if we are to have any hope of salvaging Religion from its clash with Modernity.

The quickest path to this elusive pot of gold is not a multi-colored rainbow of practices mixed from New Age sources and ancient texts, but an honest infusion of Divine realization into the life

and teachings of contemporary Western religions. Eastern religions, on the other hand, can take from the West the introspective practices of modern psychology. The transcendence of the ego-self, the ultimate goal of spiritual and mystic paths, is ironically assisted by possessing a healthy and integrated ego-self to begin with. Ignoring this fact can lead to more problems than prophets.

An ego-self that is not healthy, repressing one aspect or another, will not function any better after a mystic experience. We never lose our ego-self, we only transcend it. An unhealthy ego-self before transcendence can remain just as unhealthy after transcendence. Thus, we see the many problems with spiritual guides who have had deep realizations of the ultimate nature of reality yet still behave in a less than spiritual manner. Only an Integral spiritual path, grounded in an Integral worldview, giving equal weight to body, mind, soul, and Spirit, will escape these concerns and provide a path toward the liberation of humanity, person by person, religion by religion, until we are all free to experience the Divine directly in our own hearts.

Spirituality and Therapy

Because so many of us have one or more streams of development that lag behind our general stage of development, therapy can be an essential tool for promoting and cultivating personal growth.

We are complex creatures and a program of therapy must be equally complex. We each have a body and mind, and both have many aspects requiring attention. We have instincts and emotions that must be dealt with alongside possibly traumatic memories, depressive ways of thinking, and a shadow and persona that require integration. An Integral therapy focuses on the whole spectrum of human development engaging all the streams at each stage of growth. Wilber explains that “A full-spectrum therapy works with the body, the shadow, the persona, the ego, the existential self, the soul and spirit, attempting to bring awareness to all of them, so that all of them may join consciousness in the extraordinary return voyage to the Self and Spirit that grounds and moves the entire display.”¹¹⁰

Few of us are eager to see a doctor, especially one whose job it is to look into the very darkest recesses of our psyche, but many times the best way to chart a course through unfamiliar territory is to have the company of a guide who has been on similar journeys before. This is not to say that therapy must be a long-term process, as this can, without the guidance of a really caring therapist, turn into a situation that actually creates too much structure for real change to occur. If a person is in therapy for many years, it is entirely possible that this is a sign they are not making progress in personal growth and should either consider a different type of therapy or a different therapist. Problems arising at different stages and in different streams are best treated with different therapies. There is no one-size-fits-all therapeutic practice.

Not all people need to see a therapist, but everyone can benefit from a structured process of psychological self-introspection, particularly if they have certain emotional issues that recurrently create problems in their lives. This does not mean that they need to see a therapist, but it may be beneficial to do so. However, anyone seeing a therapist should place as much effort into this search as they would place in choosing a spiritual guide. A poor therapist can be more detrimental than no therapy at all. Beyond seeking the help of a professional, which may be financially impossible for many people, there are a number of ways we can explore our lives in a therapeutic manner, alone or in groups. The following are a few of them:

Contemplation and Meditation: Setting aside time when we can do nothing but think about the issues that are at the core of our lives, particularly those that cause us and those we love to suffer, is invaluable.

Keeping a Journal: We can get to know ourselves to a greater degree by expressing in some exterior fashion the thoughts and feelings that we hold inside. Often the things we are struggling with are too difficult to talk about with others. Writing in a journal is an excellent means of getting these things out where you can look at them. A journal doesn't mean that you have to write in first person. Sometimes it is easier to write poetry, or even short stories that deal with the issues we are struggling with.

Art: Another wonderful means of dealing with the issues we are having difficulty with is to create something. We may not have any formal training with art, but this should not inhibit us from exploring creativity as a means of investigating our internal lives.

Talking: How many conversations do we have that are really about nothing at all, yet how often do we talk to our friends and loved ones about the things that really motivate our inner lives? Though they are usually biased by their relationship with us, those we love can be a solid sounding board for us to explore many of the issues that lie beneath the surface of our relationships. Importantly, we should use any opportunity to share and explore ourselves as an opportunity to help others do the same.

Self-Inquiry

Self-inquiry is an essential component of an Integral spirituality. Only by continually questioning what we know, how we know it, and in fact, who is there to know these things, can we gain the inner realizations that free us from our negative states of mind.

We must question everything about ourselves, even our beliefs, especially those spiritual beliefs that we acquire from others. This does not mean that we need to abandon any path, merely that we should question it and question ourselves. As modern mystic and spiritual teacher J. Krishnamurti said, "Find out for yourself, not according to some philosopher, or some analyst, or psychologist, but find out for yourself."¹¹

We can begin this process in an orderly and integral fashion by questioning first our body, then our instincts, then our emotions, then our memories, and finally our thoughts. What is the truth of each of these? What is the reality of our body? It will age, become ill and eventually die. What does this mean for us? What role do our instincts have in our lives? How much are we ruled by autonomous desires, such as hunger and lust? Do we choose how we feel, or do we feel the emotions our body, brain, and mind create? Can we choose to love? Can we choose not to hate? Are our thoughts and ideas permanently attached to our memories?

How does this inform who we are? How do our thoughts create us — our sense of ego-self? Or as Krishnamurti pointed out, who are we between two thoughts? Who are we really? Is there no self in the way we normally think of it? Do all these spiritual texts and teachers have something true to offer us, or are they confused and crazy? How does my own changing view of the universe affect me, the ego-self that I identify with? Am I shaped by my actions? Do my actions reach out and relate to others and back to me? Is there really a law of karma? How far can I look into myself? What is there to see, ultimately? By questioning ourselves, our manner of existence, our vantage of experience, as well as the teachings we receive, we can compare our perception of reality to reality itself. This is no small endeavor and no short process. It is a project that continues until we apprehend reality as such, without the interference of the desires and delusions created by our ego-self.

For most of us, we will ask the same questions again and again, each time gleaning a little more of the truth of our nature, learning just that much more about who we *really* are. At first, these questions will revolve around the issues that have defined our ego-self for most of our lives.

We will continually ponder why we make the same mistakes, why we are attracted to the people we are, why we respond the way we do to the various situations of life. But as we continue to ask these questions, the answers will become clearer, and our ego-self will become more transparent until eventually, we will see straight through it to the world that has always lain beyond.

Self-inquiry, especially in a meditative practice, can open Huxley's doors of perception to the reality of the world beyond our eyes, veiled as they are by the thick muslin of misapprehension. We believe the world to exist in a certain manner, but it exists, for us, only in relation to our minds. To see the world as it truly exists, we must see clearly through our minds, and in order to do this, we must know the nature of our minds, a feat that can only be accomplished by diligent self-inquiry into the nature of our perceptions, thoughts, and consciousness.

Meditation and Mysticism

Meditation and mysticism, the direct experience of deeper transpersonal stages of consciousness, are inextricably intertwined. Every wisdom tradition that purports to reveal greater depths of reality calls upon its followers to engage in one or more methods of training the mind. This can take the form of meditation, prayers, or exercises in visualization. The goal of these practices is to gradually help the individual to transcend their separate sense of self and apprehend the reality of the universe in its fullness.

In general, there are two types of meditation: *concentration* and *awareness*. As transpersonal psychologists Roger Walsh and Frances Vaughan explain, "Concentration meditations attempt to focus attention unwaveringly on a single object such as the breath. Awareness practices, on the other hand, open awareness in a choiceless, nonjudgmental manner to whatever experiences arise."¹¹² Each type of meditation practice has a slightly different ultimate goal. In the preface to his excellent book, *The Varieties of Meditative Experience*, Daniel Goleman paraphrases psychologist and meditation teacher Joseph Goldstein, further explaining the different intentions of the two main meditation paths. "It's simple mathematics... All meditation systems either aim for One or Zero — union with God or emptiness. The path to the One is through concentration on Him, to the Zero is insight into the voidness of one's mind."¹¹³

Concentration meditation can eventually lead, with diligent practice, to the Causal stage of consciousness, while it appears that some form of awareness practice is required thereafter to result in the transcendence to the Nondual stage. This does not mean, however, that concentration meditation is less valuable than awareness, or insight, meditation. The usefulness of both at different stages will depend upon a number of factors, not the least of which being the temperament of the meditator in question. Different personalities, different paths and different goals will result in different techniques, even within these two broad categories of concentration and awareness.

For instance, one tradition may focus on a mandala while another may focus on the breath, or repeating a single prayer. Likewise, awareness meditation can have different levels of practice as the meditator becomes more proficient. It can be helpful to combine the two forms of meditation, using concentration meditations to still and calm the mind and then relying on awareness, or witnessing meditations, thereafter.

(For a brief introduction on how to meditate, see [Appendix VIII.](#))

Contemplation of Spiritual Emergence

What do you believe is the relationship between spirituality and religion? Do you feel that you are a spiritual person? In what ways? How does spirituality affect your life personally? How do you

feel that your spirituality affects your relationships with others? Do you engage in a daily spiritual practice? If so, how do you feel this is important to you? If not, what keeps you from doing so? What is your opinion about Integral spirituality, involving the body, mind, soul and Spirit?

How do you feel about the relationship between science and religion? What about the relationship between science and spirituality? How would you define the relationship between mysticism and spirituality? How do you think your worldview informs your thinking about spirituality?

Action: Take a few minutes to write a list of the most spiritual people you know. It can include public and historical figures as well as people you know personally. What do you find to be spiritual about the people on this list? What do you admire about them? How do you think their spirituality informs their lives? How do you think it helps shape the people around them? Have the people on this list had a great or small impact on culture and society? How would you want to change your life to be more like them? If you know someone who has made a similar list, take some time to discuss and examine the differences and similarities you find.

Interspiritual Prayers and Meditations for Transforming Ourselves and the World

Introduction to the Interspiritual Prayers and Meditations

The following interspiritual prayers and meditations are intended to provide a counterpoint to the contemplations of the world explored earlier. These are simple transformative practices focusing on both the interpersonal and mystic aspects of spirituality. The prayers are intended as meditative inward reflections rather than outward petitions to some exterior power. Many of these meditations have a strong aspect of visualization as it is one of the primary ways that we learn, and through which we accomplish our goals. If we are attempting a task, it often helps if we visualize it beforehand. Spiritual tasks are no different. We visualize ourselves as having attained the spiritual realizations we seek in order to make the process of accomplishing them seem less daunting.

Before beginning any of the meditations, make sure that you will have at least 20 minutes to give them your full attention. If possible, find a quiet place where you can be undisturbed for this time.

Sit comfortably, with your back straight. You can sit in a chair or on the floor, but make sure that you are not in a reclining position as it tends to induce sleep. If you are sitting on the floor, it is recommended that you sit on a cushion to provide back support.

Take a minute and just breathe deeply. Focus on clearing your mind. Breathe in a sense of calm, and breathe out the distracting thoughts that cross your mind. Slowly check over your body to make sure you are relaxed. Start with your toes, and gradually work your way up to the crown of your head. When you notice tension, just breathe it out. When your body is relaxed, focus your attention on your breathing. Imagine that as you breathe in, you inhale a pure, clear light, and as you breathe out, this light radiates throughout your whole being, cleansing and relaxing you. As your mind relaxes and calms, you can focus entirely on your breathing, observing as it passes through your nose and into your lungs. Notice how your diaphragm expands and contracts as you breathe in and out. When you feel ready, begin the meditation you have chosen.

Meditation on Spirituality and Nature

This is a meditation cultivating our awareness of the natural world and our connection to it. If you live near nature, it would be best to do this meditation somewhere outdoors. If you live in the city, you can simply imagine the last time you were in a natural setting. If you have never been in nature to any large degree, then I very much recommend taking whatever measures are necessary to do so.

After you have cleared your mind, allow yourself to remain aware of your breathing. Gradually allow your awareness to step beyond your breathing to the world around you. Become aware of the air filling your lungs and touching your face. Let yourself be aware of the grass beneath you. Allow your awareness to encompass the sun striking your skin. Then become aware of the trees, then the soil, then the insects and worms within the soil. Even imagine an awareness of the bacteria within the soil. Let your awareness encompass the other living creatures that surround you, the mice and rodents, the birds, the frogs and toads, and even the larger animals.

Gently hold your awareness of all these things. As you do so, slowly let yourself become aware of how they are all related. Become aware of how the sun lets the grass and trees turn the carbon dioxide from your breath into oxygen that you and the other animals can breathe. Become aware of how these animals help the plants to grow by spreading their seeds and fertilizing the soil. Become aware of how their bodies will be food for the insects when they die. Let yourself

become aware of how this whole system arises, moment by moment, supporting itself — each part necessary. Become aware of how your life is supported by these creatures and processes.

Open your eyes, and slowly repeat the following meditation as you breathe in and out.

The Divine arising as air.

The Divine arising as sunlight.

The Divine arising as plants.

The Divine arising as insects.

The Divine arising as animals.

The Divine arising as my body.

The Divine arising as my breath.

The Divine arising as my mind.

The Divine arising in every moment.

The Divine arising always.

Repeat this meditation for as long as time allows.

Blessings for All That We See and Use

This is a wonderful practice that helps ground us in a direct appreciation for the interrelatedness of our lives with the lives of others. It uses blessings to help us remain conscious and mindful when engaging in daily activities. You can use it nearly anywhere at any time.

As you begin your day, remain mindful of each object you touch or use. As you use each object, say a simple blessing. As you breathe in, silently repeat:

May those who made this have love and peace.

As you breathe out silently repeat:

May they be free from suffering and its causes.

In this way, you would say this blessing as you grabbed your toothbrush, again as you spread out some toothpaste, and again as you turned on the water. If you are using something for longer than one blessing, repeat it while bringing to mind all the people and beings brought into contact with you by its use.

You can say blessings when making your bed, starting your car, using your computer, watching your TV, or using your dishwasher. If you are using a product made from a living being, like your leather shoes or coat, you can repeat this blessing for those beings that died in order for you to use their bodies. This blessing can be very powerful and helpful in keeping us in touch with not only the world around us, but also the way we respond to that world from within.

Blessings for Eating and Drinking

Our spiritual growth can be greatly assisted not only by remaining mindful as we engage in routine activities, but also by cultivating a mind that is actively peaceful and thankful. Blessings are a wonderful means of doing this and we can benefit from saying blessings not only when we use items in our lives, but specifically when we are eating and drinking.

Each time you take a drink, before you place the glass to your lips, repeat this simple blessing:

May those who provided this have love and peace.

May they be free from suffering and its causes.

Use this same blessing before you take each bite of food, and while you are chewing. While saying these words silently to yourself, imagine the people you are blessing. Imagine those you

have worked to bring water to your glass. Imagine those who have grown and harvested the food you are eating. Imagine those who packaged and sold the food.

If you are at a restaurant, imagine the people cooking your food and serving it to you as you repeat the blessing. You can combine this blessing with the blessing for products from the physical world. Thus if you are cooking a meal, you might say blessings for those who mined the ore to make your pots, as well as those who fabricated them, and those who shipped them, and those who sold them, and again for those who grew, shipped, and sold the vegetables. These blessings can be a powerful tool to immerse us fully in the world we live in, moment by moment.

Blessings for World Suffering

Just as blessings can connect us more fully to our immediate world, they can help to connect us to the wider world as well. This blessing meditation is specifically written to help us grasp and contemplate the suffering of people all over the world in every moment. It is a good blessing to add at the end of a regular meditation session. The words are simple and intended to be easy to memorize. As you breathe in, repeat the first line silently to yourself, and then the second line silently as you exhale:

*May those suffering in poverty have love and peace.
May they be free from suffering and pain.
May those living in hunger have love and peace.
May they be free from suffering and pain.
May those with no access to clean water have love and peace.
May they be free from suffering and pain.
May those who are homeless have love and peace.
May they be free from suffering and pain.
May those who live with illness and disease have love and peace.
May they be free from suffering and pain.
May those dealing with cancer have love and peace.
May they be free from suffering and pain.
May those living with AIDS have love and peace.
May they be free from suffering and pain.
May those who are wounded have love and peace.
May they be free from suffering and pain.
May those who are enduring war have love and peace.
May they be free from suffering and pain.
May those who are refugees have love and peace.
May they be free from suffering and pain.
May those who are dying have love and peace.
May they be free from suffering and pain.
May those women giving birth have love and peace.
May they be free from suffering and pain.
May those being born have love and peace.
May they be free from suffering and pain.
May those who live with emotional abuse have love and peace.
May they be free from suffering and pain.
May those who live with physical abuse have love and peace.
May they be free from suffering and pain.*

May those who live with sexual abuse have love and peace.

May they be free from suffering and pain.

May those who live in prostitution have love and peace.

May they be free from suffering and pain.

May those who live in slavery have love and peace.

May they be free from suffering and pain.

May those who live without freedom have love and peace.

May they be free from suffering and pain.

May all beings who suffer have love and peace.

May they be free from suffering and pain.

Repeat this meditation for as long as the time will allow. If possible, make this a regular part of your daily meditation.

Prayers for World Peace

History can easily be read as one long struggle of conquest and violence, and so this world has always been in need of prayers for peace, but today we need them more than ever. Today there are more people suffering from hunger and poverty than were even in existence a century ago. Though our world is more interconnected than ever, there is also a greater disparity in wealth than ever before. Into this volatile mix of poverty and plenty new technologies are coming that can destroy millions of lives and do not require wealthy governments to wield them. Weapons of mass destruction are being acquired by more and more nations, only increasing the likelihood of their use. Civil wars and border conflicts are constantly being fought around the world, engulfing millions upon millions of innocent lives in the horrors of war.

Certainly, in response to the nightmares before us, we should do more than merely pray and meditate for world peace, but it can be a powerful tool for raising our awareness and maintaining our vigilance against conflict. Combined with serious civic interest in the choices of our leaders and the direction of our nations, it can help us to transform the world.

After you have completed the meditation preparations, slowly bring to mind all of the wars and conflicts in the world that you know about. Allow yourself to imagine each one separately, thinking about the people involved, the innocent families and children who are suffering death, the destruction of their homes, or being forced to flee as refugees. Imagine the effects on the land and the ruins that the cities have become. Imagine the soldiers of either side dying, often not because they want to fight, but because their leaders will kill them if they do not. Hold these things in mind and as you breathe in, repeat the first line silently to yourself, and then the second line silently as you exhale.

May those who are engulfed by war,

Have love and peace.

May those who are dying in war,

Be without pain and suffering.

May those who are held prisoner in war,

Find freedom and peace.

May those who have lost loved ones in war,

Have love and peace.

May those who have lost their homes in war,

Find shelter and peace.

May those who are living as refugees,

*Find safety and peace.
May those children fighting in wars,
Find freedom and peace.
May those children dying in wars,
Be free from suffering and pain.
May all those fighting in wars,
Have love and peace.
May the soldiers of war,
Have love and compassion.
May the generals of war,
Have wisdom and compassion.
May the leaders of the world,
Have wisdom and compassion.
May all wars quickly cease.
May all beings find love and peace.*

Repeat this meditative prayer several times. If possible, make it a regular part of your meditation practice.

Blessings When Out

A great way to stay present and mindful is to engage in blessings. This is an easy blessing that you can use whenever you are out walking. You can even use it when walking with others in between conversation. As you breathe in and out silently repeat to yourself the phrase:

*May everyone I see have love and peace.
May they be free from suffering and its causes.*

Notice how your response to people, even those you do not know, changes as you continue to bless them. You can do this blessing in many ways. If you are in a store, bless the clerk before you check out. If you are getting gas, bless the attendant. If you meet someone you know, bless them silently before you greet them, or as you part. Notice how your response and connection to the world changes as you continue this blessing practice.

Blessings for Those We Know

This is a good meditation to perform on a daily basis, but it can be especially helpful when you are having difficulty with someone you know. The blessing is very simple. As you image each person you know, repeat silently as you breathe in:

May they have love and peace.

And as you breathe out:

May they be free from suffering and its causes.

Imagine while you breathe in that you are filling your being with a brilliant light and as you exhale you are breathing this light into the person for whom you are saying the blessing. Simply repeat this blessing for every person you know, taking extra time and repetitions for those people that you are having difficulty with, or those who need your compassion. You will find that it is much more difficult to be angry and attached to your emotional responses of fear or hatred when you are blessing someone.

You can also use this blessing to keep yourself mindful and connected with the world by saying it anytime. Say it while you are walking down the street, or while in the car, or while on

the train, or while standing in line at the store, or even while seated in the movie theater and waiting for the movie to begin. Adjust the blessing to fit the circumstances. For instance, you might repeat silently to yourself as you breathe in and out: “May everyone in this traffic jam have love and peace. May they be free from suffering and its causes.”

Again, this is an especially helpful blessing to use when you are feeling frustrated by the circumstances of your life. Having to wait in line is normally an annoying experience, but you can transform it through blessings into an experience of joy and love. You can also use it when you see people suffering and do not know how else you might help them. Thus, when you see people who are having a difficult time, who are homeless, poor, or sick...if you do not know how to directly help them, you can repeat this blessing to yourself, imagining that you are breathing brilliant light into them. The intention is not to imagine you are transforming their circumstances, but rather that you are deepening your compassion for others.

A more advanced form of this meditation is the Buddhist practice of *tonglen*. It is a simple, but profound practice. First you imagine the person in need of help before you. Then you imagine that as you breathe in you are inhaling a cloud of thick dark smoke that you draw out of the person. You draw this thick dark smoke down into your heart center and there transform it into brilliant light, which you then breathe back out into the person you are meditating for. Many people are initially afraid of the nature of this meditation, in that you are drawing this black smoke of suffering into yourself, but the whole point of the meditation is that you are transforming this suffering into love, compassion, and bliss. Rather than being damaging to you, it is in fact empowering, as you are visualizing yourself destroying suffering. As with all of these blessings, their purpose is not to convince you that you are altering the reality of people’s lives with your mind and will, but rather to make you more aware of, and more filled with compassion for, the reality of other people’s lives.

This blessing and the *tonglen* meditation can also be performed for ourselves, as we are often suffering and in need of help. Just alter the visualizations to inhale brilliant light into your heart center and expel the thick black smoke of your suffering into the void.

Right Livelihood and Intention

It will be difficult for us to make spiritual progress if we are engaging in a manner of making a living that results in the harm of others. There are, of course, greater and lesser degrees of this, but we should at least endeavor to remove ourselves from work that we clearly know will result in the harm of others. We can also transform any work that we do by transforming our approach to it. For instance if we have an ordinary approach to our work and see it as a means simply to obtain money, our work will have an ordinary effect on ourselves and others. If, however, we can transform our intention to a spiritual one while working, we can transform its effect on others and ourselves.

For example, we can repeatedly think to ourselves while we are working, “I am doing this for the benefit of all living beings; may they be free from suffering and its causes.” As you recite this silently to yourself, you should envision all the people who will benefit from your efforts. By doing this we will gradually change the way we relate to our work and our motivation for doing it. Additionally, if our work is harmful in some manner to others, it will become more obvious to us as we continue this practice and it will give us guidance should we choose to find other employment (assuming such exists where we live).

Mindfulness of Work

Another way to transform our work is to remain mindful while we are working. Mindfulness can also transform all of the other activities we engage in. To assist in remaining mindful, it can be useful to utilize a short mantra, prayer, or blessing and repeat it. This repetition keeps our mind engaged and free from daydreaming and wandering, holding it in the moment and focused on the activity we are occupied with.

You could repeat, “May this action bring love and peace to all beings,” as you perform your tasks. This can be any action at a job, from fixing a pipe or mopping a floor, to entering data and answering phones. If you are doing work that is not repetitious and requires you to think or talk a great deal, you can simply say the blessing before you begin and after you end each part of it. You can also use this blessing to transform other daily tasks like bathing, or eating, or even cleaning the house. Any time you are not talking to someone, reading, or actively thinking about something, as opposed to daydreaming, you can use this blessing to remain mindful and present in the moment.

Right Consumption

Just as we need to be mindful of the nature of our employment, we need to be conscious of the nature and consequences of our consumption as well. We can do this not only by remaining aware of how our attachments and desires govern our consumption of material items, but also by transforming our intention for consumption. We can transform our intention for consumption in much the same way we can transform our intention at work. Here we approach each act of consumption and ask ourselves: “Am I consuming this for the benefit of other beings? Will my consumption of this harm other beings?”

By continually asking ourselves these questions we can gain insight into the real intention for our consumption and radically transform it. If we are buying food, we are helping ourselves stay healthy and thus, we are helping other beings, because they rely on us. But if we are buying something that directly harms others, or which we do not really need and will only eventually cause more waste, then we are acting on our selfish desires and not the desire to benefit others.

This whole process is obviously open to the use and abuse of slippery logic, whereby we say to ourselves, “I should buy the new gadget because it will make me happy and other people like it when I’m happy.” This sort of “cling to your attachment” logic will gradually decrease as you continue the practice, but you should remain vigilant toward it. There is nothing wrong with wanting to be happy, the problem will come when that happiness is founded on ephemeral things, or when it comes at the cost of harm to others. These are not true sources of happiness. True happiness is within the mind, not outside it.

Attachment to Money

Few of us tend to think that we have enough money. Almost everyone believes if they had just a little more money, they would be happier. I won’t try to argue that money is the root of unhappiness, because we all need money to supply ourselves with our basic needs. However, it is fairly clear to me, and I believe to anyone who thinks about it, that our attachment to money does cause us unhappiness. How much money do we really need to be happy? There is nothing wrong with having a nice place to live and nice things around you, but will a bigger place to live and even more things make you any happier? Will a constant stream of new things make you any happier? Has any of that made you consistently happy so far?

I'm not suggesting that we get rid of money, simply that we get rid of our attachment to it and see it for what it is. Money is a tool for the distribution of energy and resources that, because of our social structures, we need to use to stay alive and provide ourselves with the basic necessities of life and any luxuries we feel we deserve. Of course, those luxuries can be the source of both happiness and suffering. Does the ultra-expensive car make us truly happy? As happy as a warm embrace? How many couples fight over money? To what end?

Money cannot buy you true happiness. It can purchase the basic needs of life, but happiness comes from other things. Therefore, to be attached to the amount of money we have, beyond the amount necessary to provide us with a reasonably pleasant lifestyle, will only cause us unhappiness, thus making it hard to enjoy the good fortune that we do possess. There is no way to know what the right amount of money is for any person. But as our spiritual perspective deepens, our concern for money and worldly things will generally tend to diminish.

After completing the meditation preparations, let your mind slowly fill with all the ways you are attached to money. Do you see it as a sign of status? Do you like the luxuries it provides? Do you have enough to live comfortably? Have you always had enough money? Were there times when you had much less than you and your family needed? How has this bred attachment for you? Do you spend a lot of time worrying about money? Do you worry because you don't feel you have enough? How much do you think would be enough? Did you once think that the amount you have now would be enough? Does your attachment to money cause conflict in your life? Do you feel your attachment to money causes you suffering?

Contemplate these questions for a while. As you breathe in, imagine that you are inhaling a clear, brilliant light. As you exhale, imagine that you are breathing out into the void all of your attachment to money. With each exhalation feel yourself relax about all of your concerns for money. Continue this meditation for as long and as frequently as you need.

Giving

The cure for our attachment to money is not only to become aware of it, but to combat it directly through giving. If we have enough money, then giving some away will not bother us, but will instead fill us with great joy in the knowledge that we are being of service and benefit to others. Many people, especially parents, are already giving a great deal to help others — their children, or other family members. Just as this giving makes us feel good, giving to others we do not know can similarly provide us with immeasurable inner peace. Knowing that we have shared that which we have been fortunate enough to acquire with those less fortunate can transform the way we think about the wealth we have. Giving, of course, does not need to be confined to our money. We can just as easily give our time, consideration, talent, and skills with equal benefit.

After completing the meditation preparations, contemplate the many ways that you could help others by giving away money that you do not need. Could your money be used to feed and shelter others? Could it be used to help the environment? Could it be used to help your spiritual community? Could it be used to help provide education for others? Could it be used to help people who are less fortunate? How much could you give away today without feeling anxious? What about this week? What about each month? How much of your money would you be willing to share each year? After contemplating in this way, if you feel the desire to give arise within you, do not remain attached to it; act on it instead.

Ethical Action

Most of us consider ourselves to be ethical people, but most of us would also admit that there are times when we have made dubious ethical choices. How often have you been faced with an ethical problem and found yourself spending a large amount of time justifying your decision? Have you ever made an ethical decision that you later felt was wrong? What factors were involved in changing your mind? What do you feel is the basis for your ethical sense? Do you accept religious scripture as your ethical guide, or do you rely on the laws of your land? Do you feel that your ethical sense is grounded in something else? What would this be? Do you think that you are ethically more sophisticated than others? Do you feel that there are people more ethically sophisticated than yourself? What do you see as the differences between yourself and these others ethically? How do you feel that the core needs of your worldview affect your ethical stance?

When you have completed the meditation preparations, clear your thoughts and slowly bring to mind a situation where you feel you had to make a difficult ethical decision. Take a moment to think about your decision. Do you still feel that you made the right choice? If not, how has your thinking changed? What do you feel are your core needs? Can you see how these needs were connected to your decision? If you have changed your feelings about the choices you made, have your needs changed as well?

As you hold this situation in your mind, consider your needs for security and stability. Consider your needs for personal freedom and autonomy. Consider your needs for different viewpoints and seeing connectedness. Consider your need to understand suffering and compassion. How do these needs inform your ethics? How does your sense of separation from others inform your ethics?

Imagine the people involved in the ethical situation you are contemplating seated before you. As you breathe in and breathe out, imagine that you are gradually trading places with these people. What are the differences between you? Do you not want the same things? Do we not all desire love and happiness? How are these people really different from you? As you breathe in and out, imagine that the differences between you are smaller and smaller until there are no differences at all, until you are this other person, or these other people. How does this new perspective change your response to the situation you have been contemplating? Meditate on how your sense of separateness informs our ethical decisions and how your needs and worldview inform this sense of separation.

Preciousness of Human Life

The Buddhist tradition, among others, places a great importance on recognizing the preciousness of our human life, as it is only humans who can attain the spiritual realizations that lead to the liberation from suffering. The Buddhist tradition believes in karmic rebirth, meaning that we should cherish this human life we have attained because it can slip from us at any moment, and we may not attain one again for quite some time. If one does not believe in reincarnation, then human life is even more precious, because then one would not foresee a second chance at liberation.

Whatever your beliefs about reincarnation, or existence after death, we all need to realize how precious human life is, and how lucky we are to be alive. The universe can be dangerous and capricious. We could die at any moment. We all know someone who has died unexpectedly, and we must accept that this can happen to us, as well. It is important not to waste the opportunity we have to be alive.

After completing the meditation preparations, contemplate the precious nature of your human life. Meditate on how lucky you are to be able to have spiritual realizations and how unfortunate it would be to waste this opportunity. Contemplate how quickly and unexpectedly death can come to any one of us at any time. Think about how important it is to embrace the spiritual path this day, every day, and not postpone it.

We often assume there will be plenty of time for spirituality at some later time in our lives, but we can die at any time. The moment we are in *is* the moment to be spiritual, to seek the realizations that will liberate us.

Continue to meditate on the preciousness of human life, repeating the following phrases as you breathe in and out:

My human life is precious.

Only a human life can realize the Divine.

My human life is precious, and can end at any moment.

I commit myself in this moment, to being awake to the Divine in every moment.

Continue to meditate like this, and imagine as you breathe in that you are inhaling a brilliant light, and that as you exhale, this light radiates throughout your being.

Death and Illness

Though we may manage to extend the human life and even end much of the suffering that arises from illness and disease, we will always have to deal with the fact that each of us will inevitably die. A meditation in the fragility and impermanence of our human lives serves several purposes. First, it reminds us how precious our life is and how short our time on this planet can be. Even if we live until we are a hundred, this is but the smallest fraction of the age of the universe. It is an especially short time in which to find spiritual liberation. By meditating on our eventual death we can find great motivation not to waste another day and to begin our spiritual journey this very moment. In many traditions spiritual seekers who meditate on death do so in cemeteries, charnel grounds, or in the presence of dead bodies. Though we in the West may find this morbid, it is intended to ground the meditator in the utter reality and inevitability of one's own death.

Meditating on our death can also help us to recognize that it can occur at any moment. There are no guarantees that we will live to see old age. There are also no guarantees that we will not suffer from illness and disease before we suffer the effects of old age. By contemplating these forms of suffering, we can eventually be free of them. I am not suggesting a worship of death in any manner. This meditation is about accepting that which you cannot change and releasing your attachments to it in order to transcend the suffering that it creates.

When you have completed the meditation preparations let your mind gently come to rest on the thought of your own death. Imagine that your breath has stopped. Imagine that your heart has ceased to beat. Imagine that your mind has faded from existence. Imagine that your body has begun to rot. Imagine that your body has been completely reclaimed by the earth.

Slowly draw your mind back into your body and notice how fragile it is. Remember how often you have been sick, how often your body has been in pain. Everyone you know has a body much like yours. Everyone you know will eventually die. You will eventually die. How does this make you feel? Do you cling to your body and your life in a way that causes you suffering?

Imagine that as you breathe in, you are inhaling a brilliant, clear light. Imagine that as you exhale this brilliant light radiates throughout your being. As you breathe in and out recite to yourself:

I accept the impermanence of my body and mind. I release my attachments to my body and mind.

As you breathe out imagine that you are exhaling your attachments to your life and your fear of death into the void.

Gratitude

Countless spiritual teachers throughout the ages have taught that we must live in the moment if we are to find spiritual liberation. We cannot live in some constant state of desire for another life and another world, as this will only cause us suffering. This doesn't mean that we can't try to create a better world. However, if we pursue this change while swamped with our desires for a different world, we will never be able to fully enjoy the one we are in.

The following meditation on gratitude is intended to help us stay mindful and appreciate the good fortune that we do have. When you have finished the meditation preparations, recite the following blessing as you breathe in and out:

*I offer blessings in gratitude,
For each day that I am alive.
I offer thanks in gratitude,
For each meal that I eat.
I offer blessings in gratitude,
For each drink of water I take.
I offer blessings in gratitude,
For the shelter I have.
I offer blessings in gratitude,
For the companions I am graced with.
I offer blessings in gratitude,
For all the love I receive.
I offer blessings in gratitude,
For the opportunity to be on a spiritual path.
I offer blessings in gratitude,
To be alive.*

Repeat this blessing, and meditate on the good fortune you are blessed with and how you can remain aware of it at all times.

Non-Attachment

How is it that there can be so much suffering in wealthy Western nations? The average citizen has plenty of food, suitable shelter, education, access to government, and loads of technology, yet still there is suffering. Our delusion has been to supplant our real needs with consumer needs, and then to compound this delusion by remaining attached to both of these needs. Only by recognizing that our attachment to these needs is the source of our suffering will we be able to transcend them.

To do this we must first recognize that our consumer needs are ephemeral and offer us nothing that we truly desire. We really desire love and friendship, not a sitcom about friends. We really desire love and happiness, not new clothes and new cars so that people will notice us more. On a deeper level, it is even our attachment to this need for love that causes us suffering. It is not that we do not need love, but the fact that we cling to this need which causes us to suffer.

We need food and water, but in their absence, if we obsess about them, we suffer more greatly than if we accept their absence while working to obtain them. We do need love and companionship, but to attach ourselves to these needs and act from that attachment will only leave us desperate. Rather, we should acknowledge our desires and needs, but not allow ourselves to grasp at them. In this manner we can come to find love within ourselves and thus, as we transform our inner lives, we make it easier to be companions to others.

Often this is misconstrued, and people assume it means that if we lose our attachments that we become detached and then lose our love for others. It is not that we do not love others, but that we are not grasping at the desire for them to love us. In this way, our love for them becomes stronger and purer because it is not predicated on reciprocation. Moreover, when we learn to see our attachments to being loved as something we can let go of, it gradually allows us to widen the field of our love to include all people. Again, this does not mean that we do not love our spouse or our children, but that we have opened the flood gates of our heart so much that we cannot give to someone anything less than the full measure of our love.

After you have finished the meditation preparations, slowly bring to mind all the things that you think you need. What are the things you desire or crave? A new car? New shoes? New books or music? A different house? More money? Different friends? A lover? To be loved? To be happy?

Gently allow yourself to contemplate each of your desires and needs. Which ones are needs and which ones are desires? How do your attachments cause you to suffer? How does your desire for something cause you to suffer? How does your attachment to these desires and needs cause you to suffer? How might you be different if you were not grasping at these things? How might your love for others change if you were not grasping at their love for you? As you breathe in, imagine that you are inhaling a clear brilliant light. As you exhale, imagine that you are breathing out your attachments and desires one at a time. Continue this meditation until you have released, at least for the moment, all of your attachments.

Non-Judgment

Although it may not be obvious at first, there is a difference between acceptance and non-judgment. With acceptance you are trying to step beyond your expectations of a relationship or a situation. With non-judgment the idea is to be clearly aware of your reactions to a situation or a person and realize how these reactions are entirely a product of your mind. This does not mean that our judgments are not useful, that we should stop making judgments, or that they do not often reflect reality. However, our judgments can often lead us to misapprehend reality and act in ways that are inappropriate.

We must realize our judgments are a product of our mind and thus are influenced by a wide range of factors, from our emotional and psychological states to our life experience and worldview. These things may coincide accurately with reality, or due to conditions of our minds, they may have nothing at all to do with reality. Non-judgment means that we must try to be aware of the fact that our judgments may be wrong. Non-judgment is particularly necessary in dealing with the increasingly complex and culturally diverse world we are living in. The worldview we have will affect the way we approach non-judgment, and the wider our worldview, the less judgmental we are likely to be.

After completing the meditation preparations, clear your mind and slowly begin to remember a situation where you made a distinct judgment that later proved to be completely wrong. This might involve a relationship, or it could be something that happened at work or elsewhere in your

life. What was your initial judgment? Why do you think you responded that way? What was your judgment based upon? How did you turn out to be wrong?

Slowly bring to mind a time when you were judged wrongly. What caused others to judge you thusly? How were they mistaken? How did it make you feel to be judged this way? As you breathe in, imagine that you are inhaling a clear, brilliant light. As you exhale, imagine that you are breathing out all of your judgments. Imagine briefly each person in your life and how you judge them. As you breathe in, imagine this brilliant light radiating throughout your being. As you exhale, imagine that you are breathing out your judgment of this person. Continue to meditate in this manner for each person you know and for the situations that occur regularly in your life.

Anger and Fear

Anger and fear are two of our most common emotional responses, and they are very closely related. From a Spiritual perspective, our responses of anger and fear are based on a misapprehension of reality. This does not mean that if there is a bus headed toward you that you shouldn't get out of the way, or that if you are walking down a dark street that you shouldn't be extremely aware of your surroundings. However, it does mean is that if you are having a conflict with someone, responding with anger only clouds your perception of reality. In Buddhist terms, you would be responding to a delusion (the other person's anger) with your own delusion (your anger). It is also important to note that the goal is not to repress anger or fear, but to be aware of them arising. By remaining aware of our emotions, by noting when fear and anger arise, we can learn not only how to change our behavior to alter this response, we can also release these emotions harmlessly in a healthy manner.

After completing the meditation preparations, clear your mind and slowly bring to your thoughts a time when you experienced great fear, anxiety, or anger. What was the cause of this emotion? How did this emotion cloud your thinking? Were you later able to see the situation in a different light? What was the root cause of your reaction? Was it because you did not see the situation clearly at the time? Does this situation bring up feelings of anger now? Let these feelings arise.

In your mind, reconstruct the event in a manner that dispels your fear or anger. As you breathe in, imagine that you are inhaling pure, clear light. As you exhale, breathe out all your anger, fear, and anxiety. Each breath you take fills you with clarity. Each breath you exhale releases you from your mistaken emotions. Continue this meditation as long as you feel necessary, and use it after you encounter a situation in which you respond with anger, fear, or anxiety. During a situation where these emotions are arising, try to remain aware of them and notice how they affect you.

Acceptance

Much of the emotional turmoil we experience arises because we are unable to accept reality as it is. We create expectations of people and situations that are entirely of our own making and then find ourselves dissatisfied, or angry, because these expectations have not been met. To create an internal atmosphere conducive to spiritual transformation, we need to begin to accept those things that we cannot change, as well as recognize those that we can. However, acceptance does not mean complacency. While we should not expect people to behave in a manner that is out of character for them, we should also not allow ourselves to become victims of their character.

It is perfectly acceptable to have expectations of respect, love, and affection in a relationship, but when these things do not happen, we should not attach ourselves to the expectations. Instead,

we need to accept the reality of what is. Again, this doesn't mean that we have to put up with a relationship that does not meet our expectations, but we must accept that people are the way they are, and that only they can change themselves. If we make clear our needs and expectations, and they are not met, we should not respond with anger, but by releasing our attachment to our expectations. In doing so, we will be able to see the relationship or the situation more clearly. We will then be able to take those actions that promote our emotional and psychological health rather than perpetuate a dynamic based on failing to accept reality.

After completing the meditation preparations, clear your thoughts and slowly bring to mind a situation or relationship that you know to be fraught with expectations and an absence of acceptance. What about this situation do you have control over? You cannot control the other person or the variables of the situation, but you can govern your own mind. You can decide how you respond to events and how you accept that which you have no control over. This doesn't mean that you do not need to respond, but by releasing your expectations, you can respond with clarity.

Are there other things in your life that you have trouble accepting? Are there things about your relationships that you have difficulty accepting? What about your own body? Are there things about your body or personality that you have difficulty accepting? What can you change about these in a healthy way? What things would be best served by changing the way you look at them? What about things that you have no control over, like death and illness?

As you breathe in, imagine that you are inhaling a brilliant clear light. As you exhale, imagine that you are breathing out a particular attachment. As you breathe in, imagine this brilliant light radiating throughout your being. As you breathe out, imagine all your attachments flowing away. Continue to meditate in this way until you feel a clearer appreciation for acceptance.

Cultivating Compassion

The compassionate mind desires to end the suffering of others, but if not mixed with the mind of wisdom, it can result in more suffering. There is a difference between what spiritual teachers call *idiot compassion* and *wisdom compassion*. The best example is that of a mother and a child. A mother who has great compassion for her child will want to ease its suffering, but she will also know that if she does not discipline the child, it will only suffer more later in life. To leave the child undisciplined is idiot compassion, because it only brings more suffering to the child. Discipline with loving-kindness is wisdom compassion. Thus, in every aspect of our lives we need to cultivate compassionate wisdom.

After you have completed the meditation preparations, slowly bring to mind a time when you were filled with love and compassion. This could be the first time you saw your newborn child, the moment you said your wedding vows, the time you helped a friend in need — whatever incident you identify with. Sit with this feeling for a few moments. Cultivate this feeling and bring it to the front of your mind.

As you breathe in, imagine that you are inhaling a brilliant light of love and compassion. Imagine that as you breathe out, this light radiates throughout your being and into the world.

As you continue to breathe and meditate in this way, slowly begin to imagine all the people in your life. As you do so, feel the love and compassion well within you as you inhale, and flood over them as you exhale.

Gently extend your field of compassion to include everyone you know. Then slowly let it extend it to everyone where you live. Now gradually let this wave of love and compassion radiate out with your breath and extend to the trees and plants and animals that support the world around

you. Then steadily let this wave of compassionate light that radiates from you encompass the whole of the county — then the whole of the continent — and finally the whole of the world.

Imagine the people of the world being flooded by your light waves of compassion and love. Now, little by little, let this light of compassion expand outward, into the whole of the universe. Hold this image in your mind and heart for a moment, this image of a wave of love and light and compassion inundating the universe. Gradually allow the wave of light to come and rest again in your heart.

Breathe in and out as this light of love and compassion rests there in your heart center. Let it fade to a small flame of white light — a tiny flame that you can hold in your heart all day long. And as you breathe, with this flame of love resting gently in your heart, slowly open your eyes.

Cultivating Love

We each need not only to receive love, but to give love to others. If either of these needs is unmet we may find ourselves unhappy and unhealthy. How are your emotional needs being met in your life? Do you receive the love you feel you need? Are you able to give love to others freely? Do you have trouble giving love? Do you have trouble accepting it? What about forgiveness? Do you find it easy to forgive people? Do you cling to your anger and resentment and find it difficult to forgive? Do you feel that you are a loving person?

By cultivating love we can combat negative emotions and strengthen our relationships. We must learn to give love unconditionally to those in our lives. This does not mean that we should become doormats, or that we should not expect love, affection, and respect from the people in our lives, but simply that we should not attach our love and affection to our expectations. To do so sets up an economy of love, where affection is traded like some precious mineral mined at great cost. In reality, while we may be emotionally exhausted from time to time, we have an infinite amount of love to give.

After completing the meditation preparations, clear your mind and slowly allow the image of someone in your life to arise. This can be a parent, sibling, child, spouse, or friend. It can be someone you are in conflict with or simply someone close to you. Imagine this person in front of you. What is the first emotion that arises? Is it love, or annoyance, or fear, hatred, or something else? What do you expect from this person? Do they give you the love you desire from them? Are you attached to this desire for love? Do you find yourself only giving love to this person when you are receiving it?

Imagine that you are breathing in a clear stream of light. As you exhale imagine that you are breathing a brilliant light of love into this person before you. Imagine as you breathe out that this light of love fills this person and radiates outward. Imagine that you are breathing in this light of love from them and from the universe. As you exhale, you again breathe this light of love into the person you imagine before you, creating a virtuous circle of light and love. Continue this meditation until you feel pure love welling up for this person.

Then slowly imagine other people in your life gathered together. With each breath in and out, add another person in your life. As you breathe in, you inhale light and love. As you exhale, you shower these people with love that then radiates outward from them. Continue to add people that you know. Add people who are friends and friends of friends. Add people you meet at stores and people in your neighborhood. Slowly begin to imagine the city or town where you live. Imagine as you breathe out that love floods through the place you live. Imagine this love flowing with each breath further and further until it encompasses the whole planet. As you breathe in, you are breathing the love of the whole planet. As you breathe out, you are exhaling love for the whole

planet. Repeat this meditation weekly and note the effect that it has on your relationships. It is a particularly useful meditation when you are having a conflict with a particular person.

Cultivating Forgiveness

It is important to give our compassion to those who have caused us harm in some fashion in the past. Forgiveness frees our hearts, opens them to love, and unburdens us of negative minds like hatred, anger, fear, and anxiety, leaving us happier and healthier as a result. Through forgiveness we can take power over situations and circumstances that have left us feeling wounded and powerless.

This is not to suggest that we should forget the harm done to us, or that we must have contact with the person responsible, simply that we acknowledge that our hearts and minds will be better served by offering compassion for the negative minds at the root of their harmful actions, rather than clinging to negative minds, such as anger and hatred, ourselves. Additionally, if someone asks for forgiveness for their words or actions out of sincere regret, our forgiveness can be a compassionate means of helping others to change their behavior.

The following meditation can be used for cultivating compassion toward those we feel we need to forgive. However, if you have suffered a great trauma as the result of someone's actions, it would be best to avoid this particular meditation until you have had an opportunity to heal (through therapy preferably), the pain and suffering you have experienced.

This meditation can also be used to forgive ourselves. Often we carry the burden of our negative actions long after those we have harmed have forgiven us. This does not mean that we do not accept responsibility for our words and actions in the past, simply that we acknowledge that these things did happen *in the past* and that we can choose more positive words and actions, motivated by love, compassion, and wisdom, *in the future*.

After completing the meditation preparations, slowly bring to mind the image of someone in your life who you feel the need to forgive. Remember the manner in which this person harmed you through words or actions. Do not dwell on these harmful actions. Doing so is only likely to bring up emotions of fear, anger, and hatred. These may be understandable responses, however, these emotions will cloud our minds and make the mind of wisdom more difficult to obtain. Consider for a moment the negative states of mind that brought this person to harm you. How did their mind of fear, anger, hatred, jealousy, insecurity, or indifference, encourage their behavior? Realize that you can have compassion for a person possessed of such negative minds, while still holding that person accountable for their actions.

Imagine breathing in a clear brilliant light down into your heart center. As you breathe out, imagine this light radiating throughout your entire being. As you continue to breathe in this way, imagine the clear light flooding your being and bring to mind all the negative emotions and states of mind that accompany your memories of the harm that has been done you.

As you breathe in, imagine the fear overwhelmed by the light. As you breathe out, imagine the fear dissolving into the void, replaced by *fearlessness*. As you breathe in, imagine the anger overcome by the light. As you breathe out, imagine the anger dissolving into the void, replaced by *equanimity*. As you breathe in, imagine the hatred destroyed by the light. As you breathe out, imagine the hatred dissolving into the void, replaced by a *compassionate wisdom*. As you breathe in, imagine the shame obliterated by the light. As you breathe out, imagine the shame dissolving into the void, replaced by *self-confidence*. As you breathe in, imagine the pain vaporized by the light. As you breathe out, imagine the pain dissolving into the void, replaced by *inner peace*.

Continue this meditation until you feel your painful states of mind lessening and transformed to positive, helpful states of mind. You may wish to repeat this meditation regularly if you have a great deal to forgive someone for.

Loving-Kindness

Loving-kindness is a way of being in the world. It is the constant expression of love and compassion for all beings in every moment in every situation. Attaining this way of being takes practice and this meditation is intended to help us apply loving-kindness to the different aspects of our lives.

When you have finished the meditation preparations slowly let your mind go over the activities of a normal day. Beginning with the very moment you open your eyes in the morning, and ending with the moment you close them to go to sleep, let your mind drift through the events and actions of a typical day. With each moment you examine, imagine how you might approach that situation with loving-kindness. Could you get ready to go to work with loving-kindness? Could you talk to the people in your life all day long with loving-kindness? Could you do your work with loving-kindness? Could you travel to and from your home with loving-kindness? Could you shop with loving-kindness? Could you spend every moment with your family in loving-kindness?

How can you bring loving-kindness into every action you take? What effect will this have on your life? As you breathe in, imagine that you are inhaling a clear brilliant light of loving-kindness. As you exhale, imagine that this light and this loving-kindness radiate throughout your being, filling every aspect of your life, engulfing everyone you know and the whole of the world. Continue to meditate in this way as long as you can.

Deep Consciousness

In general, psychologists, cognitive scientists, philosophers, and cybernetics engineers all assume that consciousness is a product of the brain. They then make the assumption that the brain continues, through one theory or another, to create a mind. The experiences of spiritual sages and mystics do not agree. It seems clear from a reading of contemporary and philosophical writings on consciousness and mind, as well as a survey of the opinions of mystics and sages from the various wisdom traditions, that mind and consciousness are different. A full discussion of this subject is beyond the confines of this book, but a simple definition will help give depth to the following meditation.

In my opinion, there is only consciousness. Physicist Evan Harris Walker sums this up nicely in his book *The Physics of Consciousness*. He writes: “Consciousness is not thinking. Consciousness is not thinking about one’s consciousness. It is not self-reflection. Consciousness needs no words and needs no things. Those born blind or deaf and mute, they are as conscious as you or I. A fly blankly staring at a red tablecloth in a red room will have consciousness. A man sitting on the beach at Waikiki, eyes closed, mind thoughtless...even after six months will still have consciousness. In fact, he will be consciousness. He will be the consciousness.”¹¹⁴ Everything from matter, to life, to mind, is this consciousness and experiences this consciousness to one degree of depth or another. An animal with a brain will have a greater experience of the depth of consciousness than a plant. And the more complex the brain, the deeper the experience of consciousness.

In addition, the brain, at least in the case of humans, creates a mind. Again, the more complex the mind, the more it is able to recognize itself for what it is, and the deeper the experience of consciousness. A mind that perceives itself as separate and singular will have a more shallow experience of consciousness than a mind that is able to abide in pure awareness and gradually come to perceive the universe from a nondual perspective. The reason I believe this has been made more confusing than it needs to be is because we assume that the brain must create consciousness when it creates a mind. Our brain experiences everything, and one of the reevaluations of continued meditation is that we can experience our minds, that, in essence, we are consciousness, or if you like, we are the Divine — Spirit — the Ground of All Being.

After you have completed the meditation preparations begin the following pure awareness meditation. As you breathe in, recite the first line to yourself, and as you exhale, recite the second line.

*I am my body,
Yet I am more than merely my body.
I am flesh and bone,
Yet I am more than merely flesh and bone.
I am breath and heartbeat,
Yet I am more than merely breath and heartbeat.
My body may be observed in all its aspects,
Therefore I am more than merely my body.
I am my instinctual responses,
Yet I am more than merely my instinctual responses.
My instincts may be observed in all their aspects,
Therefore I am more than merely my instincts.
I am my emotions,
Yet I am more than merely my emotions.
I am my love and joy,
Yet I am more than merely love and joy.
I am my anger and hatred,
Yet I am more than merely anger and hatred.
I am my jealousy and fear,
Yet I am more than merely jealousy and fear.
I am my loneliness and sorrow,
Yet I am more than merely loneliness and sorrow.
My emotions may be observed in all their aspects,
Therefore I am more than merely my emotions.
I am my mind,
Yet I am more than merely my mind.
I am my memories,
Yet I am more than merely my memories.
I am my thoughts,
Yet I am more than merely my thoughts.
I am my daydreams,
Yet I am more than merely my daydreams.
I am shadow and persona,
Yet I am more than merely shadow and persona.*

*I am my desires and attachments,
Yet I am more than merely desires and attachments.
My mind may be observed in all its aspects,
Therefore I am more than merely my mind.
Thus is...
Pure awareness.
Thus is...
The Divine.*

After reciting this meditation allow yourself to remain in the state of pure awareness as long as possible. If your mind strays, simply breathe in while reciting “Pure” and breathe out while reciting “Awareness.”

Study of Sacred Texts

An Integral spirituality incorporates our body, emotions, minds, souls, and Spirit. As such, study of spiritual texts should be a significant part of our spiritual practice. Certainly, this means studying the major texts of one’s particular religion, but it should also include a broad education in the texts of other paths. Any spiritual path or practice can benefit from an alternative perspective. By studying the different wisdom traditions of the world, we can not only get a better sense of their ultimate unity, but we can also see our own path with a new depth and appreciation.

This is not a meditation but a project. Get a blank book or notebook and make a collection of quotations for your personal study. Collect one quote each week. The quote can be of any length and can be anything from an aphorism to a prayer to a meditation. Try to alternate each quote so that one will be from your own tradition and the following from a different path. Keep at this for a year, or until you have filled the book. When you are finished, take five minutes each day to read and contemplate at least one of the entries in your personal book of spiritual inspiration.

Desire for Transformation

In Mahayana Buddhism, the desire to attain enlightenment for the benefit of all beings is known as *bodhichitta*. It is considered a prerequisite for beginning the spiritual journey that leads to liberation from suffering and delusion. A Bodhisattva is one whose enlightenment is dedicated to the benefit of all beings. By generating the desire to attain spiritual transformation not only for the sake of ourselves, but for the sake of all living beings, we reinforce the very process of transformation itself. We create the opportunity for ourselves to become Bodhisattvas.

Spiritual transformation is, at its heart, a transcendence of our separate self and, as such, the desire for this transcendence must be rooted in a desire to help other living beings, rather than to simply free ourselves from suffering. Otherwise, our desire to attain liberation purely for our own benefit will only serve to hold us fast to that separate self, and thus hinder our spiritual advancement.

When you have finished the meditation preparations, repeat the following blessing, breathing in and out as you alternate the lines.

*May I achieve spiritual transformation,
For the benefit of all living beings.
May I act with compassion,
For the benefit of all living beings.
May I act with wisdom,*

*For the benefit of all living beings.
May all my actions bring joy and end suffering,
For the benefit of all living beings.
May my meditations bring me insight,
For the benefit of all living beings.
May I achieve spiritual transformation,
For the benefit of all living beings.*

Repeat this blessing as you imagine breathing in a clear brilliant light that is the desire to achieve spiritual transformation for the benefit of all beings. As you exhale imagine that this light and this intent radiate throughout the world.

Spiritual Community

Our spiritual growth depends not only on finding an authentic path that we connect with and a spiritual guide we can entrust ourselves to, but a community that can support us, and which we can support, as we take this journey of transformation. A spiritual community allows us not only to rely on those who may have a little more experience in dealing with the problems we will inevitably face, but also affords us the support of people who are similarly working to transform their lives. A spiritual community provides us with examples of how we can live our lives and how we can pursue the spiritual goals we are striving for. It also offers an excellent opportunity for service, allowing us to contribute to the growth and successful transformation of others, from directly interacting with them to simply supporting the community's efforts to exist.

This meditation is a blessing for whatever spiritual community you have chosen to be a part of, and more generally, for the community you live in. After you have completed the meditation preparations, slowly repeat the first line as you breathe in and the second line as you exhale.

*May those who support me on my path have love and peace,
May I return their kindness tenfold.
May those who support me with teachings have love and peace,
May I return their kindness tenfold.
May those who support me emotionally have love and peace,
May I return their kindness tenfold.
May those who support me with their wisdom have love and peace,
May I return their kindness tenfold.
May I accept with wisdom and grace,
All that others give to me,
May I give to others,
Tenfold what I am given.*

Repeat this blessing several times, each time imagining a different person from your community that you are directing it toward.

An Interspiritual Daily Practice

Introduction to the Interspiritual Sadhana

A sadhana is a simple set of prayers and meditations combined in a specific fashion to assist in spiritual transformation. Often, in the Hindu and Buddhist traditions from which they arise, the texts of sadhanas are chanted aloud by the spiritual community. They are also recited silently in private.

While inspired by the Tibetan Buddhist tradition, the following interspiritual sadhana is nondenominational and intended to be applicable to everyone's life. Even atheists can find this series of meditations useful and transformative. The sadhana is broken into twelve distinct sections, each with a particular spiritual lesson at its core. While it is intended to serve as the basis for an extended meditation session, it can also be used by choosing one or two sections that are the most appropriate for the experiences of the day and focusing solely on those. If only a few sections of the sadhana are used, it is recommended that the first and last sections still be utilized to open and close the meditation session as they are important for setting the motivation of the meditations and generating the resolve to put the realizations arising from them into action in our lives. The twelve stages of the Interspiritual Sadhana are as follows:

Setting the Stage for Transformation: This initial stage is to help pacify the mind and set a pure intention for engaging in the rest of the practice. Our intention, our motivation, will set the tone for everything we do, especially in our spiritual practice.

Purification: This stage concentrates on purifying our mind by reflecting on the negative thoughts and actions of our life. By acknowledging these thoughts and actions, we can cleanse our mind of them and their continued influence over our lives, releasing us to think and behave differently in the future.

Purifying the Body: At this stage of the sadhana, we acknowledge that our state of mind affect the state and health of our bodies. By pacifying and purifying our thoughts, we create the circumstance to envision, and eventually realize, a healthy body

Purifying the Mind: This stage of the sadhana concentrates on clearing our negative thoughts and focusing on our potential for a peaceful state of mind through forgiveness and abandoning our attachment to the past. As our thoughts determine our reactions to past events, by creating positive states of mind, we can create the conditions for pure thoughts and actions to arise.

Discovering True Happiness: The next stage is focused on abandoning our desires and attachments in order to understand the true source of our suffering. The more we cling to and grasp at our base desires, the more difficult it will be to discover true happiness and inner peace.

Dissolving the Negative States of Mind: At this stage of the sadhana, negative states of mind such as anger, fear, jealousy, greed, and hatred are remembered and then envisioned as dissolving into a formless void, freeing the mind of negativity. As we continue to purify our negative states of mind, or delusions, and generate positive states of mind, we create the fertile ground for lasting inner peace.

Abandoning Self-Adoration: In this stage, we dissolve our self-centered states of mind into the void, releasing us slowly from grasping at ourselves as all important. By abandoning self-adoration, we help to open ourselves to the interconnectedness of all life and abandon our limited sense of a separate self for that of our Genuine Self — transcendent in its embrace of the Divine.

Cultivating Positive States of Mind: This stage of the meditations concentrates on cultivating universal love and compassion. By seeing the suffering of all living beings as our own

suffering, we develop the capacity to love all beings unreservedly, and our minds fill with compassion for all people and all living beings.

Cultivating Subtle States of Mind: At this stage of the sadhana, we begin to cultivate subtle states of mind through mindfulness meditation. By pacifying the mind and resting in pure awareness, we set the conditions for a peaceful mind and heart, for an equanimity that resides with us throughout our day.

Cultivating a Divine State of Mind: This stage of the sadhana expands our pure awareness into divine awareness — nondual apprehension of the Divine as it manifests as all people and all things. By embracing the Divine, by realizing our own nature as the Divine, by learning to perceive all beings and all things of the cosmos as a manifestation of the Divine, we open ourselves to our true nature, to the ultimate reality of existence, and to profound spiritual liberation.

Manifesting the Divine: This stage focuses on taking the realizations of the preceding stage of divine awareness and channeling it onto envisioning our lives as living expressions of the Divine. By imagining ourselves inspirationally to be like the sages of the past whom have awakened to the Divine, we create the circumstances to achieve these spiritual realizations ourselves, and to embody the Divine in all that we do.

Resolution and Motivation: In this final stage of the sadhana, we set a motivation for our life and actions after the meditation session has ended. By resolving to transform our minds and embody a wise and compassionate expression of the Divine with our words and actions, we create the causes to accomplish further spiritual realizations, to free our minds from suffering, and to assist others in doing the same.

Interspiritual Sadhana

Setting the Stage for Transformation

(Clearing the mind and setting a pure motivation.)

All life is short and mine is no exception.

Death is certain and can come at any time.

I must begin today to realize my spiritual destiny.

I must seize this and every moment to transform my heart and mind.

I seek the wisdom handed down by the long lineage of enlightened women and men throughout history.

I seek a peaceful mind free from anger and hatred.

I seek a boundless heart filled with love and compassion.

I seek the limitless embrace of the Divine Ground of Being.

Imagine all the enlightened men and women throughout time and space appearing before you, radiating a brilliant, pure light. As you breathe in, imagine drawing this light down into your heart. As you breathe out, imagine this light radiating throughout your entire body, eliminating any tension and cleansing your mind of any distractions.

Recite the following words mentally as you breathe in and out:

My body is relaxed and alert.

My mind is clear and peaceful.

(Repeat 3+ times.)

Observe your breathing and your mind in silence.

Purification

(Reflecting on negative behavior and purifying the mind.)

My thoughts have effects upon my mind.

My words have effects upon others.

My actions have effects upon the world.

Negative thoughts create negative words and actions which lead to harming others.

Positive thoughts create positive words and actions which lead to helping others.

Imagine the people you have harmed through negative words and actions recently. Hold these words and actions in your mind.

Imagine all your negative thoughts, words, and actions as a dark smoke clinging to your mind and body.

Now imagine breathing a pure, clear light into your heart center from above and below. As you breathe out, this pure, clear light radiates through your being, dissolving the dark smoke and destroying it. Breathe in and out in this manner until all the darkness has been eliminated.

Recite the following words mentally as you breathe in and out:

*My mind is pure and peaceful.
My words and actions will be wise and compassionate.
(Repeat 3+ times.)*

Observe your breathing and your mind in silence.

Purifying the Body

(Visualizing a healthy body.)

*My body is the vessel for all of my actions in this life.
The thoughts of my mind affect my body.
By purifying my mind I can help purify my body.
With this pure vessel I can engage in pure actions.*

Bring to mind all of the ailments that affect your body, from tension to illness. Imagine that the ailments take the form of a dark smoke that clings to the afflicted parts of your body.

Imagine breathing a pure, clear light into your heart center from above and below. As you breathe out, this pure, clear light radiates through your body, dissolving the dark smoke and destroying it. Breathe in and out in this manner until all the dark smoke has been eliminated.

Recite the following words mentally as you breathe in and out:

*My body is filled with purifying light.
My body is healthy and strong.
(Repeat 3+ times.)*

Observe your breathing and your mind in silence.

Purifying the Mind

(Visualizing a healthy mind.)

*The past does not exist, but my mind clings to the pains of all the yesterdays in my life.
Only by releasing my grasping at the past can I be free to embrace the present.
By forgiving those who have trespassed against me, I can be free of the pain of their transgressions.
By cultivating forgiveness, I strengthen my Genuine Self and sever the ability of the negative words and actions of others to define my life.*

Hold in your mind a single incident where you experienced negative words or actions against you, whether recently or in the distant past. Imagine these words or actions as a dark smoke that clings to your body and mind.

Imagine breathing a pure, clear light into your heart center from above and below. As you breathe out, imagine that this brilliant light radiates throughout your being and destroys the dark smoke clinging to your body and mind. Breathe in and out in this manner until all the dark smoke has been eliminated.

Recite the following words mentally as you breathe in and out:

*The words, thoughts, and actions of others do not define my mind or my life.
My mind and my life are defined by my thoughts, words, and actions.
(Repeat 3+ times.)*

Observe your breathing and your mind in silence.

Discovering True Happiness

(Abandoning desires and attachments.)

*Suffering arises from being denied that which I desire.
Suffering arises from enduring that which I dislike.
Suffering arises from aging, sickness, and death.
Suffering arises from grasping at sources of happiness outside my mind.
Happiness does not originate with people or things.
People and things can only provide the conditions for happiness.
True happiness comes from within my own mind.
My mind cannot be peaceful as long as it grasps at things and people as a source of happiness.
Grasping at my desires is the source of my suffering.
By releasing my attachment to my desires, I can attain inner peace.*

Imagine breathing a pure, clear light into your heart center from above and below. As you breathe out, imagine that this brilliant light radiates throughout your being.

Recite the following words mentally as you breathe in and out:

*I abandon my attachment —
To the desires of my body.
I abandon my attachment —
To eating, drinking, and physical pleasure.
I abandon my attachment —
To the desires of my mind.
I abandon my attachment —
To my desire for knowledge and mental stimulation.
I abandon my attachment —
To my desire to be seen as unique or special.
I abandon my attachment —
To my desire to be seen as intelligent or attractive.
I abandon my attachment —
To my desire for love and affection.
I abandon my attachment —
To the love and affection of my friends and family.
I abandon my attachment —
To my desire for wealth and recognition.
I abandon my attachment —
To my desire for possessions.*

*I abandon my attachment —
To my desire for safety and security.
I abandon my attachment —
To work and accomplishment.
I abandon my attachment —
To being in control of the events of my life.
I abandon my attachment —
To my desire to control others' lives.
I abandon my attachment —
To my memories and the past.
I abandon my attachment —
To my thoughts and the present.
I abandon my attachment —
To my daydreams and the future.*

Observe your breathing and your mind in silence.

Dissolving and Replacing the Gross States of Mind

(Replacing negative states of mind with positive states of mind.)

*My mind is like a pool of water.
Negative thoughts cloud the water and pollute my mind.
By purifying my thoughts I can pacify my mind.
A clear mind can cultivate pure thoughts and pure actions.*

Imagine breathing a pure, clear light into your heart center from above and below. As you breathe out, imagine that this brilliant light radiates throughout your being.

Recite the following words mentally as you breathe in and out. Hold your breath between each phrase for seven seconds while you bring to mind a recent example in your life of the indicated state of mind. Release the mental example as you breathe out, imagining the particular state of mind dissolving into the void.

*The mind of impatience arises —
(Hold breath for seven seconds.)
The mind of impatience dissolves.*

*The mind of anger arises —
(Hold breath for seven seconds.)
The mind of anger dissolves.*

*The mind of hatred arises —
(Hold breath for seven seconds.)
The mind of hatred dissolves.*

*The mind of fear arises —
(Hold breath for seven seconds.)*

The mind of fear dissolves.

The mind of anxiety arises —
(Hold breath for seven seconds.)
The mind of anxiety dissolves.

The mind of jealousy arises —
(Hold breath for seven seconds.)
The mind of jealousy dissolves.

The mind of greed arises —
(Hold breath for seven seconds.)
The mind of greed dissolves.

The mind of pride arises —
(Hold breath for seven seconds.)
The mind of pride dissolves.

The mind of self-criticism arises —
(Hold breath for three seconds.)
The mind of self-criticism dissolves.

Observe your breathing and your mind in silence.

Imagine breathing a pure, clear light into your heart center from above and below. As you breathe out, imagine that this brilliant light radiates throughout your being.

Recite the following words mentally as you breathe in and out. Hold your breath between each phrase for seven seconds while you bring to mind a recent example in your life of the indicated state of mind. Hold on to the example as you breathe out, imagining the particular state of mind remaining powerfully in your mind.

The mind of patience arises —
(Hold breath for seven seconds.)
The mind of patience remains.

The mind of equanimity arises —
(Hold breath for seven seconds.)
The mind of equanimity remains.

The mind of fearlessness arises —
(Hold breath for seven seconds.)
The mind of fearlessness remains.

The mind of peace arises —
(Hold breath for seven seconds.)
The mind of peace remains.

The mind of generosity arises —
(Hold breath for seven seconds.)
The mind of generosity remains

The mind of love arises —
(Hold breath for seven seconds.)
The mind of love remains.

The mind of compassion arises —
(Hold breath for seven seconds.)
The mind of compassion remains.

Observe your breathing and your mind in silence.

Abandoning Self-Adoration

(Transcending the superficial mind.)

My mind creates my sense of self, superficial and separate from all else.
This superficial mind grasps at itself as independent and all important.
By purifying my mind, my Genuine Self is revealed.
My Genuine Self is interdependent with all people and all things.

Imagine breathing a pure, clear light into your heart center from above and below. As you breathe out, imagine that this brilliant light radiates throughout your being.

Recite the following words mentally as you breathe in and out. Hold your breath between each phrase for seven seconds while you bring to mind a recent example in your life of the indicated state of mind. Release the mental example as you breathe out, imagining the particular state of mind dissolving into the void.

The mind of self-grasping arises —
(Hold breath for seven seconds.)
The mind of self-grasping dissolves.

The mind of self-adoration arises —
(Hold breath for seven seconds.)
The mind of self-adoration dissolves.

The mind of the superficial self arises —
(Hold breath for seven seconds.)
The mind of the superficial self dissolves.

The mind of the Genuine Self arises —
(Hold breath for seven seconds.)
The mind of the Genuine Self remains.

Observe your breathing and your mind in silence.

Cultivating Positive States of Mind

(Universal Love and Universal Compassion.)

No one wishes to suffer.

In this, all beings are alike.

The superficial mind sees the suffering of others as separate from my own.

The Genuine Self sees the suffering of others as inseparable from my own.

The suffering of others is my own suffering.

I will cultivate the desire to end the suffering of others as I would seek end my own suffering.

All beings deserve the love that is without fail —

The eternal and undying Universal Love.

All beings deserve the compassion that seeks to end all suffering —

The boundless embrace of Universal Compassion.

Imagine all the people in your life and the suffering they endure. Imagine all the people in your town or city and the suffering they experience. Imagine all the people in your country and the suffering they encounter. Imagine all the people and living beings of the world and their suffering. Imagine this suffering as a cloud of dark gas.

Imagine breathing a pure, clear light into your heart center from above and below. As you breathe out, imagine that this brilliant light blazes in your heart center.

Imagine breathing the dark gas of all those who suffer down into your heart center. This dark gas of suffering is ignited, purified, and transformed in the sun-like center of your heart.

Imagine your heart center shining ever-brighter as pure, clear light radiates from your being. As you exhale, this brilliant light washes outward to heal the suffering of all the people and living beings of the world.

Recite the following words mentally as you breathe in and out:

May all beings have love and peace.

May all beings be free from suffering and its causes.

(Repeat 3+ times.)

Observe your breathing and your mind in silence.

Cultivating Subtle States of Mind

(Mindfulness and equanimity.)

Beyond words, thoughts, or actions rests the inner stillness of the mind.

A pure-still mind is the true source of inner peace — unshakable in the face of adversity.

An ever-present pure-still mind destroys all suffering.

A truly pure-still mind is the ultimate liberation.

Imagine breathing a pure, clear light into your heart center from above and below. As you breathe out, imagine that this brilliant light radiates throughout your being.

Recite the following words mentally as you breathe in and out:

My mind is pure and still.
My mind is the essence of awareness.
(Repeat 3+ times.)

Observe your breathing and your mind in silence.

Cultivating a Divine Mind

(Mediation on Divine Awareness.)

A Divine Mind sees beyond the veil that clouds the sight of the superficial self.
A Divine Mind perceives the nondual nature of all things.
A Divine Mind sees the Divine in all things.
A Divine Mind is the Ground of All Being.

Imagine breathing a pure, clear light into your heart center from above and below. As you breathe out, imagine that this brilliant light radiates throughout your being.

Recite the following words mentally as you breathe in and out:

I breathe in the pure, clear light of the Divine.
My body dissolves into pure divine light.
(Repeat 3+ times.)
I breathe in the pure, clear light of the Divine.
My mind dissolves into pure divine light.
(Repeat 3+ times.)
I breathe in the pure, clear light of the Divine.
Pure divine light radiates throughout my being.
(Repeat 3+ times.)
I breathe in the pure, clear light of the Divine.
My being becomes inseparable from the pure, clear light of the Divine.
(Repeat 3+ times.)
I breathe in the pure, clear light of the Divine.
I am the pure, clear light of the Divine — nondual with all phenomenon.
(Repeat 3+ times.)
There is only the pure, clear light of the Divine.
The Ultimate Ground of All Being.
(Repeat 3+ times.)

Observe your breathing and your mind in silence.

Manifesting the Divine

(Envisioning the Divine Self in Action.)

All things are a manifestation of the Divine.

*My mind is a pure manifestation of the Divine.
My body is a pure manifestation of the Divine.
My thoughts, words, and actions will be a pure manifestation of the Divine.*

Imagine the Divine in personified form (the Buddha, Jesus, Krishna, etc.) appearing before you. Imagine this divine being transforming into pure, clear light.

Imagine breathing a pure, clear light into your heart center from above and below. As you breathe out, imagine that this brilliant light radiates throughout your being, transforming you into the essence of the divine being before you.

Recite the following words mentally as you breathe in and out:

*I am the essential nature of the divine (insert name here).
I am the essence of wisdom and compassion in action.
(Repeat 3+ times.)*

Observe your breathing and your mind in silence.

Resolution and Motivation

(Resolve and intention.)

*I resolve to transform my mind and manifest pure thoughts.
I resolve to transform my life and manifest pure actions.
I resolve to transform the world, and assist others in realizing and manifesting a pure expression of the Divine.*

If you have a personal mantra, repeat it now as you focus on your breathing. If you do not have a personal mantra you can simply repeat the following phrase until you feel ready to conclude the meditation session:

Breathe... (While breathing in.)
And be. (While breathing out.)

When you have finished your mantra recitation, imagine breathing a pure, clear light into your heart center from above and below. As you breathe out, imagine that this brilliant light radiates throughout your being and permeates the universe.

Imagine that all of your thoughts, words, and actions will be a pure manifestation of the Divine.

Recite the following words mentally as you breathe in and out:

*I am a pure manifestation of the Divine.
I will manifest the Divine purely in all that I do.
(Repeat 3+ times.)*

Observe your breathing and your mind in silence.

Epilogue: Divine Mind = Divine World

The separation between spiritual and global transformation is just as illusory as the separation between the universe and the Divine. The cosmos is Divine, and we need only open our eyes to it to be blessed by it. By learning to see ourselves and the cosmos clearly, we can begin to create a human world that echoes the Divine nature of the whole. If we are to have some hope of a better future, of a world with equal joy and prosperity for all, then we must begin to create this world in every moment.

The seeds of this creation are planted within each of our hearts and minds. It is our calling to nurture not only our own seeds of creation, but also those of every single person on this planet. It is only by cultivating our inner personal and spiritual transformations, by making each action an act of liberation for ourselves and others while simultaneously cherishing and encouraging this liberating transformation in all people, that we can succeed in reaping a harvest of worldwide change. If we can do this, if we can manage the courage and persistence that it requires, then we can birth from the burgeoning Chrysalis Age that is rapidly enclosing us a global civilization as beautiful and as subtle as the symbolic butterfly.

This book has been my attempt to fulfill these twin aspirations, striving to provide a framework for personal, spiritual, social, and cultural transformation for others while simultaneously attempting to evoke these same transformations within my own life. This book has become a forum in which to express my deepest concerns and my most heartfelt hopes for the future. Though it has wandered over a great deal of territory, the premise has been simple — we must acquire deeper worldviews with which to apprehend the world we are creating through the forces of technology and globalization and fashion a vision of the future with which we can transform ourselves personally, culturally, socially, and environmentally.

It is my sincere hope that if this book accomplishes nothing else, it will at least serve as a catalyst to the reader, igniting passion for change and providing the necessary tools from which they can create their own personal alchemy of individual and collective transformation. As we each set off in search of our own personal philosopher's stone, we gather the joint strength and courage to transmute the base natures of humanity and the gross materials of the world into the subtle gold that reflects the true causal imminence of the Divine. The process of transmutation requires an intense heat, and we must begin to ignite the sacred fire within each of our hearts.

And we must do so with all possible haste.

The Chrysalis Age will be a time of violent and radical change lasting throughout all of the 21st century, if not beyond. We are living in a world that is, every day, fraught with more and more dangers. The following decades will likely see a number of disturbing trends: widespread civil, regional and international wars; national and international terrorism; the rise and spread of new, high-tech weapons of mass destruction; the continued spread of traditional weapons of mass destruction; uncertainty in an increasingly interconnected and complex global economy; vast discrepancies between levels of wealth and well-being between the world's citizens (whether in developed or developing nations); continued environmental pollution, especially in poorer nations; vast population growth in many developing nations; aging populations stacked against declining numbers of employable youth in developed nations; rapid changes in technology causing volatile shifts in labor values and markets; widespread human suffering resulting from poor access to food, shelter, and clean water; possible international crises resulting from competition for scarce resources such as oil and water; social and environment upheaval from the genetic engineering of humans, plants, and animals; social and cultural change driven by computer and robotic

technology; unpredictable effects of the implementation of nanotechnology; a lack of media expression for citizens; a shrinking civil society; larger, more powerful, and less accountable transnational corporations; urban decay, suburban blight, and rural decline; and the ever-present specter of the consequences of a century-and-a-half's worth of greenhouse gas emissions coming home to roost in the form of unpredictable and potentially catastrophic climate changes.

The Chrysalis Age will be a century of promise, but whether its possibilities tend toward the utopian or the apocalyptic will depend largely upon how we, as individuals, manage to push forward a collective movement of Integral thought, culture, and action. The Traditional worldview was once sufficient to deal with the dangers of the 19th century, and the Modern perspective barely managed to escape the hazards of the 20th century intact. However, neither the Traditional, Modern, or Postmodern worldview is capable of dealing with the possible perils that we are faced with as we plunge headlong into the new millennium.

To grow and develop as human beings intellectually, emotionally, and spiritually is to place ourselves on a complex and daunting journey. It is a journey that we do not take alone, but one that we embark upon in the company of friends, family, and the world at large. As we change, the world changes. And as we change the world, it changes us. This is an inescapable cycle that we can either become aware of, and use to the advantage of all human beings, or which we can ignore, and in our ignorance, allow the world, as well as our hearts and minds, to be molded in ways we would never consciously desire.

We must instead wake up. We must awaken to the reality of the Divine in all things, and the need to consciously express the Divine in all that we do. By becoming pure expressions of the Divine in each of our actions, we create a world alive to the Divine. Imagine, if you will, a world where each person was awake to the Divine and expressed it in every breath, every step, every embrace, every thought, and every creation. Imagine that we could purely express the Divine with each building we erected, with each economic interaction, with each plant harvested, and with each technology we implemented. Such a world is possible. It is within our ability to create. But it will never come to pass as anything more than the wishful daydreams of a few visionaries unless we can learn to desire it more than the world of glitz and glitter that we pawn off on one another as the height of civilized humanity.

Unless we collectively cultivate a desire for realizing the Divine that exceeds our delusional desires for excessive material luxury and the vacuous virtual reality of homogenized corporate media entertainment, we will forever be trapped in a samsaric web of our own making. And we will have created the collective spider of consumption that comes and dines upon our individual souls, leaving them as dried, empty husks, rotting in the sun. To change this scenario we need only change our minds. It is not something that we can do in one day, or one week, or one year, but hopefully, we will begin this task. And hopefully, this book will be of some assistance in that process.

Word of mouth and recommendations are essential in helping an author's work find new readers. If you enjoyed *The Alchemy of World and Soul* please consider writing a short review at Amazon. Even a few words would be very helpful.

Suggested Readings

Readings on Spiritual Transformation

The following books provide a wide array of approaches to spiritual transformation and are chosen to appeal to all spiritual aspirants, regardless of religious affiliation.

A Path With Heart: The Classic Guide Through the Perils and Promises of Spiritual Life by Jack Kornfield

Awakening to the Sacred: Creating a Spiritual Life from Scratch by Lama Surya Das

Breath Sweeps Mind: A First Guide to Meditation Practice by Jean Smith

Chop Wood, Carry Water: A Guide to Finding Spiritual Fulfillment in Everyday Life by Rick Fields et. al.

Essential Spirituality: The 7 Central Practices to Awaken Heart and Mind by Roger Walsh

Gifts of the Spirit: Living the Wisdom of the Great Religious Traditions by Philip Zaleski and Paul Kaufman

How to Know God: The Soul's Journey into the Mystery of Mysteries by Deepak Chopra

Hymns to an Unknown God: Awakening the Spirit in Everyday Life by Sam Keen

Integral Life Practice: A 21st-Century Blueprint for Physical Health, Emotional Balance, Mental Clarity, and Spiritual Awakening by Ken Wilber, Terry Patten, Adam Leonard, and Marco Morelli

Living in Balance: A Dynamic Approach for Creating Harmony and Wholeness in a Chaotic World by Joel Levey and Michelle Levey

Living the Mindful Life: A Handbook for Living in the Present Moment by Charles T. Tart

One River, Many Wells: Wisdom Springing from Global Faiths by Matthew Fox

Paths Beyond Ego by Roger Walsh and Frances Vaughan

Radiant Mind by Peter Fenner

Spirit Matters by Michael Lerner

Spirituality and Social Action by Vimala Thakar

Care of the Soul: A Guide for Cultivating Depth and Sacredness in Everyday Life and The Soul's Religion: Cultivating a Profoundly Spiritual Way of Life by Thomas Moore

The Direct Path: Creating A Journey to the Divine using the World's Spiritual Traditions by Andrew Harvey

The Enlightened Mind: An Anthology of Sacred Prose by Stephen Mitchell

The Essential Mystics by Andrew Harvey

The Life We Are Given: A Long-Term Program for Realizing the Potential of Body, Mind, Heart, and Soul by George Leonard and Michael Murphy

The Mystic Heart: Discovering Universal Spirituality in the World's Religions, Brother Wayne Teasdale

The New American Spirituality: A Seeker's Guide by Elizabeth Lesser

The Perennial Philosophy by Aldous Huxley

The Simple Living Guide by Janet Luhrs

Reading the Future: Utopia vs. Apocalypse

For those readers who are interested, the following is a short list of works dealing with utopia and apocalypse:

An excellent overview of the concept of utopia in history, literature, and philosophy can be found in *Utopia: The Search for the Ideal Society in the Western World* by editors Roland Schaer, Gregory Claeys, and Lyman Tower Sargent. For the philosophically-minded, there's Plato's *Republic*, which is interesting to read alongside H.G. Wells' *A Modern Utopia* and his *Things to Come*. This later work was made into a film that can be watched back to back with Fritz Lang's *Metropolis*, which presents a dystopian future, for some fascinating comparisons. Wells' vision of the far future found in *The Time Machine* also shows certain parallels to Lang's film. Additionally, one can watch the modern Japanese anime film *Metropolis* for further comparison.

Back to books, we have St. Augustine's *City of God*, which isn't strictly a utopia, but which sets forth some clear ideals about society. Then you have Francis Bacon's *The New Atlantis* and St. Thomas More's *Utopia*. These both apply ideas of the Enlightenment to the questions of how to construct society. Edward Bellamy's *Looking Backward* is a late 19th century treatise on socialism's promise for the 20th century, told from the perspective of a man looking back over it. B.F. Skinner's *Walden Two* applies his ideas about behavior modification to society at large. There's also Mack Reynolds' *Commune 2000 A.D.*, which is an amusing seventies projection about life in the third millennium. Ernest Callenbach's *Ecotopia Emerging* is a more contemporary take on an ecological movement that changes society. And of course, *Star Trek* is nothing if not a long, drawn out utopian tale of the promise of technology in the face of human (and alien) nature.

For those more interested in apocalypse, I recommend John Clute's book on the subject, *The Book of End Times*. For fiction you can start with Mary Shelley's *The Last Man*, which is nearly, but not quite as good a read as her *Frankenstein*, a book that sheds important light on the future science of genetics. There is also the Hindu myth of the age of the Kali Yuga or the Dark Age, which many people feel we are living through now.

For those who enjoy a more dystopian view, I recommend a comparison between Yevgeny Zamyatin's *We*, Aldous Huxley's *Brave New World* and *Brave New World Revisited*, as well as the better-known *1984* by George Orwell. And if you're the sort who prefers to watch dystopia, then you can't get much darker than Ridley Scott's film *Blade Runner*, based on the novel *Do Androids Dream of Electric Sheep* by Philip K. Dick. Neal Stephenson's *The Diamond Age* isn't really dystopian, but it does present a dark vision of a future dominated by nanotechnology, as do Kathleen Ann Goonan's *Queen City Jazz* and *Crescent City Rhapsody*. Lastly, for a book that gives an all too prescient prediction of dysfunctional postmodern life, there's Stanislaw Lem's *The Futurological Congress*.

If you want some non-fiction doom and gloom, see the following books: Jeremy Rifkin's *Biotech Century*, Neil Postman's *Technopoly*, Stephanie Mills *Turning Away from Technology*, Edward Tenner's *Why Things Bite Back*, Jerry Mander's *In the Absence of the Sacred* as well as his *The Case Against the Global Economy*, David Korten's *When Corporations Rule the World*, *Global Instability* by editors John Grieve-Smith and Jonathan Michie, Lawrence Harrison and Samuel Huntington's *Culture Matters*, Robert Kaplan's *The Coming Anarchy*, and Benjamin Barber's *Jihad vs. McWorld*.

If you crave some sweetness and light for your vision of the future, you can't beat these sometimes overly optimistic visions of tomorrow: Lee Silver's *Remaking Eden*, Michael

Dertouzos' *What Will Be*, Ray Kurzweil's *The Age of Spiritual Machines*, Michael Zey's *Future Factor*, John Micklewait and Adrian Wooldrige's *A Future Perfect*, G. Pascal Zachary's *The Global Me*, Richard Rosencrance's *The Rise Of The Virtual State: Wealth and Power in the Coming Century*, Rosabeth Moss Kanter's *World Class*, and Kenichi Ohmae's *The Borderless World*.

Appendix I: Stages of Personal Development

The stages of personal, or psychological, development are the essential worldviews we have available to us. Understanding them helps us understand our own development, our own worldview, and how deeper or wider worldviews are available to us.

A broad range of psychologists have clearly identified at least six primary developmental stages, or worldviews, that human beings can and do progress through.¹¹⁵ Because there are so many researchers and so many different approaches to systemizing the stages of development, I will rely on the work of psychologist Robert Kegan to briefly describe them. Kegan's *In Over Our Heads* is an excellent introduction to the different stages of development that we all pass through, as well as being a cogent discussion of the problems arising when our world demands too much of our worldview.

Writing about the disjunction between what the world expects of us and our abilities to meet those expectations, he concludes that it will "...demand something more than mere behavior, the acquisition of specific skills, or the mastery of particular knowledge..." to bridge that gap. It will be a difficult process and it will make "...demands on our minds, on how we know, on the complexity of our consciousness."¹¹⁶ Understanding this process can help us engage in it.

Synthesizing the work of numerous psychologists, including Jean Piaget, Lawrence Kohlberg, Jane Loevinger, and Carol Gilligan, Kegan presents six main stages of development that each human potentially passes through as they grow from child to adult. I say potentially, because, as Kegan makes clear, it is possible for people to either become arrested at a particular stage, or for them to experience a trauma at an earlier stage that adversely affects their ability to fully function at later stages. Kegan refers to these stages as *orders of consciousness*.

What Kegan labels as the *first order of consciousness* is really the second stage of development. The first stage covers the period of time from birth until a child has become aware of and interacts with its environment. During this stage, the child senses little separation between its interior world and the external environment.¹¹⁷ At the second stage of development, or *first order consciousness*, the child has begun to become "conscious" in the way we typically understand the word. The child can communicate clearly, and begins to develop a nascent sense of ego-self, or the sense of separate identity that evolves and matures as the mind develops from childhood to adulthood, but it does not fully perceive the meaning of "the other." By *second order consciousness*, the child has begun to understand the "other," and is able to see things from another's perspective, but not with priority.

With *third order consciousness*, a person gains the ability to fully perceive another's perspective, and defines the way they interact with others by very specific rules. With *fourth order consciousness*, a person's perceptions and identifications continue to expand, allowing them to identify with multiple perspectives. Their relationship to the world is guided by an understanding of the importance of the group, though the self is still considered primary. The last stage, *fifth order consciousness*, is a multi-perspective worldview that tries to see all other viewpoints and order them into a coherent framework. Persons at this stage do not simply consider how they relate to others, or groups of others, but how all groups and individuals interrelate.

Kegan labels these last three stages of development as Traditionalism, Modernism, and Postmodernism, and they relate very closely to the three worldviews proposed by Ray and Anderson's research on Traditional, Modern, and Cultural Creative worldviews. The Integral stage, the stage that work by other researchers such as Ken Wilber and Clare Graves suggests exists beyond Kegan's Fifth Order Consciousness, incorporates the Postmodern tendency for

multiple perspectives, but instead of granting each viewpoint equal weight, the Integral stage attempts to weave this multiplicity of vantage points into a coherent whole. Thus the Integral stage transcends but includes the Traditional, Modern, and Postmodern stages.

While there have been some recent studies to suggest that there is a neurological difference in brain physiology between individuals that may account for their different perceptions of the world, or worldviews, these studies are not conclusive. They have generally been structured to find differences between conservatives (what I would refer to as Traditionals) and liberals (what I would refer to as Postmoderns). Self-identified liberals tend to have a larger anterior cingulate cortex (ACC), the area of the brain involved in decision making, impulse control, and detecting and assessing conflict. In contrast, self-identified conservatives tend to have a larger right amygdala, which regulates emotional responses. These studies seem to suggest that a larger ACC might lead to more critical assessments situations, while a larger right amygdala might lead to more emotional assessments of situations.¹¹⁸

While the studies do show distinct differences in brain physiology between the two groups, they do not indicate whether this difference is physiologically inherent and gives rise to different perceptions, or where this obvious physiological difference is the result of brain plasticity in response to perceptual differences. In other words, are the brains of conservatives and liberals different because they were born that way with a genetic predisposition, or do they become different as the brain reacts from a particular perspective, changing as it develops from one worldview to another? I suspect the latter to be the case, as it would support the shifts between worldviews seen in the research of developmental psychologists. Moreover, while developmental psychologists have assessed at least six primary worldview stages, the neurological studies in question are focused only on the political perspectives of two of them.

The point of all this is simple, and hopefully has not been missed in the avalanche of terms and jargon: We have available to us at least six stages of personal development, each of which successively embraces a wider, deeper, and more connected view of the universe. Each stage will inevitably create problems that can only be resolved by the subsequent stage. The problems created by a Traditional worldview will be more easily resolved by a Modern worldview, and likewise, the problems our Modern and Postmodern minds have created will be more easily solved by Integral minds. It is important to note that as each stage is transcended, many of the insights, viewpoints, and beliefs of that stage, which are perfectly healthy and valid, should be retained as an individual transcends one worldview for the next.

Postmodern vs. Integral

A brief description of postmodernism and its relation to the Integral worldview will be helpful in clarifying and understanding an analysis of a human world that has been dominated, academically at least, by both functional and dysfunctional Postmodern perspectives for the last quarter century.

Postmodernism is not a school of thought or a particular philosophy. It is a different mode of perception, a different worldview, as applied to a number of fields, from art to literary criticism and from cultural anthropology to philosophy. Much of what passes for, or is labeled as Postmodern, is really a failure to fully integrate different perspectives into a coherent whole. In contrast, an Integral worldview is fully unified and multi-perspective. The contributions of postmodern thought have been enormous when they have verged on the Integral, but have been damaging and distracting when they have remained dysfunctional and failed to present an integrated view of reality.

Writing at mid-century, before the rise of what is usually called postmodernism, sociologist Paul Sorokin presciently described what he felt would happen to our modern worldview as the century progressed. “Where before there was a mental and moral order — a reflection of the order of the systems of sensate values and meanings, shortly a mental and moral chaos will arise. The distinction between true and false, right and wrong, beautiful and ugly, positive and negative value will be more and more obliterated...Mental and moral atomism will grow and with it, mental and moral anarchy.”¹¹⁹ A better description of extreme or dysfunctional postmodernism’s effect on Western society would be hard to write even 80 years later.

The essence of the Postmodern worldview is the attainment of multiple perspectives, or the elimination of any single, privileged perspective. While at first blush this seems like an Integral worldview, the dysfunctional postmodern perspective tends to disdain both hierarchy and context, creating from a multifaceted world of many depths, what Wilber refers to as a “flatland.” In attempting to see from a number of perspectives, the extreme postmodern worldview gives each viewpoint equal weight. Thus as Glenn Ward writes in his introduction to postmodernism, “There is, for example, no self-evident reason why Bach should be seen as better than Bacharach. This is not to say that they are the same, just that they are equal.”¹²⁰ More specifically he concludes, “...critics and theorists need to stop thinking of culture as a building with two stories. Culture is in a sense flat rather than hierarchical: it is a horizontal field in which different areas of interest mix, converse, cross over and sometimes fight with each other. It is not a vertical edifice in which influences and/or disagreements travel up and down between the top (art and literature) and bottom (mass or popular culture) floors.”¹²¹ This is a worldview that recognizes no difference in artistic complexity between Francisco Goya’s painting *The Third of May* and the urinal that Marcel Duchamp placed in his exhibit and called art. They can both be seen as art, and one can personally prefer Duchamp’s work to Goya’s, but to say that both are of equal complexity (artistically, culturally, and socially) is not to be holding multiple perspectives, but to be lost in a lack of context of those perspectives.¹²²

Without contexts, multiple perspectives tend to lose all meaning. This then leads to a dismantling of reality in a fashion that places everything on equal footing. As Huston Smith noted, “...postmoderns think that more disconnections, more dismantling and difference (and the increased fragmentation, distractions, and dispersion these produce) is what we need.”¹²³ Wilber expands upon this when he describes the dysfunctional Postmodern project as declaring that “...truth itself is culturally relative and arbitrary, grounded in nothing but shifting historical tastes, or power and prejudice and ideology. Since truth is context-dependent, the argument goes, then it is completely relative to changing contexts. All truth is therefore culturally constructed — the social construction of gender, the social construction of the body, the social construction of pretty much everything — and because all truth is culturally constructed, there are and can be no universal truths.” As Wilber goes on to illustrate, this viewpoint falls apart under its own assumptions. “This view thus claims that there is no universal truth at all — except for its own, which is universal and superior in a world where nothing is supposed to be universal or superior at all.”¹²⁴

In attempting to find truth through multiple perspectives, which is an admirable goal, the dysfunctional postmodern worldview equalizes in value the contexts and depths that establish meaning, thus making meaning meaningless. But as Wilber so rightly points out, contextualism “...means neither arbitrary or relativistic. It means determined by contexts that constrain the meaning. In other words, ‘context’ means ‘constraints,’ not chaos.” In this way, he concludes “...meaning is indeed context-dependent (there are only holons!), but this means neither arbitrary

nor relative, but firmly anchored in various contexts that constrain the meaning.”¹²⁵ More explicitly, meaning and truth are found not simply from cultural contexts but from social, psychological, and physical contexts at every depth of being. All of the aspects of being at every depth, (Wilber’s Four Quadrants of Being), need to be brought to bear in the search for truth. This is the Integral perspective.

The Integral worldview is one in which the postmodern penchant for perspectives is not allowed to run amok, creating a morass of multiple views held all in equal importance. An Integral worldview seeks to weave from a mass of multiple perspectives a coherent vision of their interrelatedness, including their hierarchical relationship to each other. Dysfunctional postmodern worldviews tend to disdain or disregard hierarchy, generally feeling that it places one view, one person, or one thing in a superior position over others. Hierarchy is natural, and some views are more complete than others. As the Great Chain of Being and the notion of holons make clear, the whole of the universe is a hierarchy, or a holarchy, if you will.

The problem is not hierarchy itself, but dysfunctional hierarchy that places things, people and ideas in an inappropriate context to one another. For example, in regards to views on art and literature, we all have our opinions, but some opinions are more informed than others. The opinion that Shakespeare is a less-than-talented writer is perfectly valid, and one that has been held by a number of prominent critics since his day. However, the view of someone who has never read Shakespeare is less valid than someone who has read *King Lear*, which is again less valid than someone who had read all of Shakespeare, which is also less valid than someone who has studied, acted, and directed all of Shakespeare’s works. A dysfunctional postmodern worldview would consider each of these views to be equally valid. An Integral worldview, by contrast, sees that while each view has value, the more encompassing worldview, the one with the greatest depth, is more encompassing of truth.

This can be a difficult idea to get one’s head around as we usually tend to assume that our view of the world is either inherently correct, or at least of equal value as the next person’s. Just as it is hard for a person with a Traditional or Modern worldview to accept that the perceptions of a person with Postmodern worldview might encompass more truth, and thus have more value, it may also be difficult for someone with a Postmodern or an Integral worldview to accept that there are perspectives deeper than their own. These deeper worldviews are the transpersonal, or Spiritual, perspectives available to each of us. Each successive worldview acknowledges truths that the previous stage is oblivious to. This is contrary to the dysfunctional postmodern perspective that believes all viewpoints are of equal value. In contrast, the Integral perspective, and more so the Spiritual perspective, attempt to see the value of each viewpoint in relationship to all viewpoints and the world that they view.

Appendix II: Stages of Sociocultural Development

Just as there is ample evidence to conclude that we all pass through various stages of development individually, there is also a strong argument to be made that societies at large pass through similar stages of development. The art, writing, myths, and culture of each stage reflect the society's interior perception of reality. A walk through any good museum will illustrate this. Think of the difference between the Paleolithic cave painting of Lascaux or the Venus figurines of Willendorf and compare them with the painted pottery of Greece and Egypt. How do these compare with Giotto's use of perspective in the Scrovegni Chapel of Padua? And how does this differ from Michelangelo's Sistine Chapel paintings, or Leonardo da Vinci's *The Last Supper*? What about Turner's paintings of London, or Monet's impressions of the French countryside? And surely, no one saw things quite the same way as Picasso, whose work moved from expressionism, to cubism, to surrealism, to abstract representation in a matter of years. Envision his painting of *Two Women Running on the Beach* next to one of Jackson Pollack's enormous, paint-splattered canvases. How do these compare to Andy Warhol's *Marilyn* paintings, or to a contemporary artist like David Salle, with his layered imagery juxtaposing numerous cultural iconographic symbols in a single frame? These artists were clearly viewing the world in different ways.

Psychologist Erich Neumann believed that "the evolution of consciousness by stages is as much a collective human phenomenon as a particular individual phenomenon."¹²⁶ One of the first people to carefully study the cultural anthropology of human history and conclude that we have passed through clearly identifiable cognitive stages was independent scholar Jean Gebser. In his book *The Ever-Present Origin*, Gebser outlined six broad worldviews that societies pass through. The first is the *archaic*, corresponding to Paleolithic hunter-gatherer bands who had not yet begun to develop complex cultures and societies. The second is what Gebser terms the *magical* structure, in which language and primitive art begin to emerge and humans understand the events of their world as occurring through some non-causal, or magical process. The third stage is the *mythical*, in which humans explain their world through myths and stories. In the fourth, or *mental* stage, the society begins to investigate the causal relationship between events and reality, leaving behind myth and relying on the senses and reason. Gebser's fifth stage, the *rational* stage, is both a progression of the mental and an aberration of it. This stage takes the positive empirical aspects of the mental and distorts them, consistently breaking reality down into its smallest components yet failing to reorder or understand them as a whole. The final stage in Gebser's mapping of cultural worldviews is the *integral*, which heals the dysfunction of the rational and creates a consistently universal picture of reality.

It is important to note that while each successive stage encompasses a deeper, more complex apprehension of the world, all of the prior stages are still available to an individual, and by extension, still active, or capable of being activated in a society. As Gebser explains, "*We must first of all remain cognizant that these structures are not merely past, but are in fact still present in more or less latent and acute form in each one of us.*" [Italics in original.]¹²⁷ While an individual or society may, in general, operate from a rational perspective, it is entirely possible for them to access and act from earlier worldviews, especially in times of stress. Thus we see that a person or a nation with a generally Modern and rational worldview may behave from a Traditional and/or mythic worldview when threatened. This can be seen clearly in a nation at war, or a people defending themselves from an act of violence. While this momentary regression is natural, it is by no means inevitable. By understanding the nature of our worldview we can consciously decide not

to slip into a less complex way of viewing the world, both individually and collectively. This can become a tool for mitigating internal and external conflicts between people, cultures, and societies.

Another more recent investigation into the worldviews of different societies and how we can use this knowledge is found in the work of Don Beck and Christopher C. Cowan. Their book, *Spiral Dynamics*, is based on the biopsychosocial mapping of psychologist Clare Graves, and outlines eight main stages of sociocultural development.¹²⁸ They label these with colors, which keep the names from being value-laden. Each stage has a clearly different motivation. The first, or *beige* stage, is motivated by “staying alive through innate sensory equipment.” The second, or *purple* stage, is motivated by “blood relationships and mysticism in a magical and scary world.” The *red* stage is motivated by enforcing “power over self, others, and nature through exploitative independence.” Persons and societies at the *blue* stage of development are motivated by “absolute belief in one right way and obedience to authority.” In contrast, the *orange* stage is motivated by “possibility thinking focused on making things better for [the] self.” With the *green* stage, “well-being of people and building consensus get highest priority.”

These first six stages comprise what Beck and Cowen refer to as first-tier thinking. While each successive stage of the first tier encompasses a wider, more complex worldview, it is only with the second-tier worldviews that the individual perspectives of each stage are seen as a coherent, multi-viewed, multi-layered whole. Thus the *yellow* stage believes in “flexible adaptation to change through connected, big picture views,” while the eighth and final stage of *turquoise* focuses on “attention to whole-Earth dynamics and macro-level actions.”¹²⁹ Although first-tier worldviews can deny the realities of previous stages, these second-tier worldviews do not tend to deny the perspectives of the earlier stages but instead acknowledge their needs and motivations, while at the same time attempting to place them within a context that recognizes their stage-specific value as well as the value of the whole spectrum of consciousness. Thus the second-tier stages are Integral in the sense I have been using the word to refer to worldviews.

A quick look at the different worldviews described by the four systems thus far explored, from Robert Kegan’s *In Over Our Heads* to Ray and Anderson’s *The Cultural Creatives* to Gebser’s *The Ever-Present Origin* to the work of Graves as described by Beck and Cowen in *Spiral Dynamics*, elicits some striking similarities. These similarities provide a general framework from which we can conclude that while there may be a small amount of disagreement as to the specifics of the different worldview stages available to individuals and societies as they grow and mature, there is, nonetheless, a broad consensus that these stages of perception and conception are real.

Looking at them in detail, the first three stages of *Spiral Dynamics* — beige, purple, and red — roughly correspond to Gebser’s archaic, magic and mythical stages. They also match up roughly with Kegan’s first three stages of consciousness. The red and blue stages of *Spiral Dynamics* are delineations of Gebser’s mental stage and align with Kegan’s third-order consciousness. The green stage corresponds to Gebser’s rational stage and Kegan’s fourth-order consciousness. The yellow and turquoise stages are successive aspects of Gebser’s integral stage and Kegan’s fifth-order consciousness. These final stages also align with Ray and Anderson’s work.

When I refer to Traditionals, I am usually speaking of people with a Blue perspective. Moderns have an Orange perspective and Postmoderns have a Green perspective. Finally, Integrals have first a Yellow, and eventually, a Turquoise perspective. The chart that follows should help make this clearer.¹³⁰

Worldview Systems Chart

Ray & Anderson	Kegan	Gebser	Spiral Dynamics	Worldviews
	Infancy	Archaic	Beige	No Solid Self
	1st Order Consciousness	Magic	Purple	Self Only
	2nd Order Consciousness	Mythic	Red	Self & Family
Traditionals	3rd Order Consciousness	Mythic/Mental	Blue	Self & Community
Moderns	4th Order Consciousness	Mental	Orange	Self & Nation
Cultural Creatives (Postmoderns)	5th Order Consciousness	Rational	Green	Self & World
Integral (Breedon)		Integral	Yellow/Turquoise	Self & All Things

Appendix III: Streams and Waves of Personal Transformation

As discussed earlier, there are at least six major stages of personal ego-self-development that we can all potentially move through. In addition, there are at least four major stages of transpersonal, or spiritual, development also available to humanity.

While the personal stages are devoted to creating a stable, integrated ego-self, the transpersonal stages result in the individual sense of awareness slowly extending beyond the separate ego-self. The ego-self, as I am using the phrase, is the sense of separate identity that evolves and matures as the mind develops from childhood to adulthood. The ego-self is composed of a number of different, distinct elements that all develop independently, though in relationship to one another, in a healthy process of maturation. These different *streams*, as Ken Wilber refers to them, run through all of the stages of development, each involving a different aspect of the mind.

As Wilber explains, “Streams are the various developmental lines (such as cognitive, moral, psychosexual, affective, interpersonal, spiritual, and so on) that develop relatively independently through the basic levels or waves (so that a person can, for example, be at a fairly high level of development cognitively, a medium level emotionally, and a low level morally; development is anything but a linear, step-by-step affair.)”¹³¹ In a healthy process of development, these streams will progress at roughly the same pace, though as Wilber points out, not necessarily in tandem. In an unhealthy process, for instance where an individual has suffered some sort of trauma in a particular stream at some stage, there can be an arrested development of that stream. For example, if someone experiences an event that damages their emotional stream when they are a child, there is the strong possibility that this emotional stream will remain stunted or malformed, even though they may develop to later stages in adulthood.

The stages of personal development we will focus on here are those of adulthood and the ones that have been the central topic of the book thus far: the Traditional, the Modern, the Postmodern, and the Integral. As I pointed out elsewhere, these stages all have different names, depending upon which psychologist’s system you are referring to, but for the sake of clarity, I will stick with these four labels.

By now, the definitions of these four stages should be fairly clear, so I will not repeat them. On the other hand, it is important to mention the major streams of development I will deal with. These are the *cognitive*, *emotional*, *interpersonal*, *moral*, and *spiritual*. There are certainly other streams of consciousness, but these five are the primary ones affecting adult development.

Psychologists are still debating the exact number and kind of streams in personal development. Howard Gardner, in his book *Frames of Mind*, suggests that there are seven types of intelligence, or streams of development. He labels these the *linguistic*, *logical-mathematical*, *musical*, *bodily-kinesthetic*, *spatial*, *interpersonal (others)*, and *intrapersonal (self)*. Gardner, at odds with many other psychologists, does not believe in a distinct moral intelligence or stream, but he does suggest the possibility of a spiritual intelligence, though he does not commit himself to the idea.

Richard Wolman, writing in *Spiritual Intelligence*, believes his research on spiritual intelligence is much more conclusive and is fully in favor of recognizing and exploring it. Another psychologist, Daniel Goleman, has written in clear support of an emotional intelligence, and writes persuasively to defend it in his aptly named book, *Emotional Intelligence*.

There is, as yet, no perfect consensus on the different types of intelligence, or as I am referring to them here, streams of development. However, the five streams of development I have chosen to

focus on do seem to have enough research behind them to support using them as the basis of an approach to personal transformation.

Beyond stages and streams, there is also the possibility of peak experiences of development. These peak experiences, or epiphanies, can occur in any stream and can range between any stages of development. Thus, as often happens, a person may have a peak spiritual experience from a stage well beyond the one they are normally at. This does not mean this person is now operating at a higher stage but simply that they have glimpsed, in that one stream, how a higher stage views the world. This is also possible in other streams as well.

For instance, someone with a Traditional worldview may have a moral stream at the Modern stage and then have a peak experience of a higher Spiritual stage's moral view. This peak experience will eventually fade, and the person will return to their previous level of development for that stream. However, this peak experience can have transformative effects, causing the person to change their life in ways that eventually result in transcendence to the next full stage of development.¹³²

As Ken Wilber points out, the way we progress through stages of development, stream by stream, stage by stage, proceeds in a cycle of *differentiation*, *integration*, and *transcendence*. We first *differentiate* from the stage where we are and then slowly begin to *integrate* aspects of the stage we are developing toward. For instance, in moving from a Traditional to a Modern worldview, we would first begin to differentiate from the views we were holding, toward say, religion, and then integrate the Modern views as we acquire them. As we fully integrate the viewpoints of the next stage, we *transcend* the previous stage. If this has been a healthy process, we do not lose anything from the previous stage, but we will still have access to it. Each stage transcends, but includes the viewpoints of the previous stages.

Problems can arise when differentiation becomes dissociation, and instead of integrating new realities, we abandon old ones. A good example of this is the Modern tendency to jettison spirituality when it goes through the process of differentiating from the different dogmas of religion. A healthy differentiation recognizes that religion must relinquish its stranglehold on truths about the universe. Dissociation pushes that to the total abandonment of spirituality. Thus, even though an individual or a culture can transcend to a new level of development, there may be significant problems with some of the streams within each stage that keep them from easily developing to the next stage.

Transcendence can also be problematic, becoming repression, as the aspects of one stage restrict those of a lower stage. Transcendence is necessarily hierarchical, or holarchical, if you will, but if a stage becomes repressive of lower stages, then this becomes pathology, and threatens the entire system. Using the previous example, if the Modern worldview were to jettison spirituality instead of questioning the physical truths of religion and then further repress the expression of religion, this would be a pathological transcendence.

In attempting to jump-start our own individual development between stages, not to mention that of the general culture, it is important to keep in mind this process of differentiation, integration, and transcendence, and the problems that can occur with each. While a Modern worldview is more complete than a Traditional worldview and an Integral worldview more complete than a Postmodern one, it is still possible for any of them to become dysfunctional or pathological at any stage. And again, it is also possible for any stream with these stages to become dysfunctional, thus threatening the mental health of the person as a whole.

Appendix IV: Stages of Spiritual Development

Although spiritual growth can and does occur at any stage of development, being a separate stream unto itself, it is important to study the actual stages of spiritual development.

The transpersonal stages of development are largely involved with the dissolution of the separate sense of ego-self. This does not mean that the ego-self is lost or eliminated; it means that it is transcended. In transcending the ego-self, in leaving behind the sense of separateness that accompanies it, one can be released from the problems that are rooted in this perception. Of course, each stage of development has its own problems that can only be resolved by the perspectives available at deeper stages, and this holds true for the spiritual, or transpersonal, stages as well. The exception to this is the final stage, which is the state of ultimate liberation or enlightenment, from which all problems, all reality, is seen with clarity as a manifestation of the Divine, of Spirit, the Ground of All Being.

Even a brief study of the stages of transpersonal development could cover numerous mystic traditions and dozens of studies of consciousness by transpersonal psychologists. Because Ken Wilber's work is just such a synthesis, I will use his four-stage model of transpersonal development as a framework and reference. As explained briefly earlier, Wilber delineates four stages of transpersonal development; *the Psychic*, *the Subtle*, *the Causal*, and *the Nondual*. As with the personal stages of development, each transpersonal stage has its own needs, perceptions, and means of expression.

Before detailing them, a brief word to the skeptics is in order. In general, skeptics tend to ignore the claims of transpersonal stages of consciousness because they are interior experiences, and thus only quantifiable as related to others verbally or through writing. In my opinion, the primary reason so many people, even psychologists, have difficulty accepting the idea of transpersonal stages of development is because they are not seeing the world from these wider, more encompassing vantage points. It is easy for an adult, with what Robert Kegan would call fourth-order consciousness, to see the stages of first-, second-, and third-order consciousnesses, but they will likely be unwilling to admit a fifth-order consciousness. Likewise, unless they have an experience of the transpersonal stages, skeptics of all stripes tend to doubt that there can be a deeper worldview beyond their own, particularly one that discloses a view of reality that undermines the solidity of their ego-self.

There is also the statistical improbability that so many mystics and sages throughout the ages could have reported such similar perceptions of reality across cultures and countries, and that they are all either wrong or crazy. This would be the same as assuming that all children who report a first-order consciousness perception of the world are incorrect. They aren't mistaken; their views of reality are simply not as complete as their parents' views. Similarly, a Modern worldview has a deeper view of reality than a Traditional worldview, an Integral worldview is then deeper than a Modern or Postmodern worldview, and a Spiritual worldview is deeper than an Integral worldview.

In the transpersonal stages the same holds true; the Psychic stage is less encompassing than the Subtle, the Causal deeper than the Subtle, and the Nondual encompasses everything. The only way to apprehend these truths revealed by the transpersonal worldviews is to experience them directly, the same way we experience any worldview. Just as there are tools we can use to help us transcend stages of personal development, meditation is the primary exercise used to transcend the transpersonal stages. If we want to prove that deeper perceptions of reality exist, we have only to perform the experiment of engaging in a regular, dedicated practice of meditation within a structured spiritual path.

Wilber's first transpersonal stage, the *Psychic* stage, is commonly referred to as nature mysticism. Wilber calls it the *Psychic* stage because the word has its roots in the word *psyche*, by which he intends it to refer to higher states of consciousness beyond rationality. It is called nature mysticism because mystics at this stage often note a strong identity with nature, so much so that in deep experiences they can transcend their ego-self to identify directly with some feature of nature, such as a mountain or a tree. As Wilber explains, "You're on a nice nature walk, relaxed and expansive in your awareness, and you look at a beautiful mountain, and wham! — suddenly there is no looker, just the mountain — and you are the mountain."¹³³

This is not a psychotic break with reality but a deeper apprehension of reality. A psychotic episode is a misapprehension of reality, not a deeper experience of it. While mystics will report similar experiences of seeing reality in a deeper manner, psychotics will report similar symptoms and widely different experiences of reality. As Wilber goes on to explain, "You can still tell perfectly well where your body stops and the environment begins — this is not a psychotic adualism or a 'resurrection in mature form' of psychotic adualism."¹³⁴ With further clarity he adds, "The global or worldcentric awareness simply steps up another notch, escapes its anthropocentric prejudice, and announces itself as all sentient beings. You experience the World Soul."¹³⁵ In other words, the Integral worldview is transcended yet again for an even wider perspective, one that Ralph Waldo Emerson called the World Soul, or Over Soul. As Emerson wrote, "We live in succession, in division, in parts, in particles. Meantime within man is the soul of the whole; the wise silence; the universal beauty, to which every part and particle is equally related; the eternal ONE."¹³⁶

It is at the *Psychic* stage where we become aware of that which is commonly termed the soul, or our True Self, or Genuine Self, or Witness. Many traditions use the word *soul* in a way that implies a continuation of the person beyond death. This is not what I mean by the use of the word. Our soul is that core of our being that is beyond the ego-self with its thoughts, memories, emotions, and attachments. It is the Witness, or as Sri Ramakrishna called it, the I-I, the I beyond I, or what Tibetan monks of the Vajrayana tradition would call the Clear Light of Bliss or the Very Subtle Mind. It is always present, though we rarely see it, clouded as our perception is by delusions, attachments, and distractions.

At the *Subtle* stage, the identification with the Witness or True-Self deepens and expands. Wilber explains that *Subtle* here means "...processes that are subtler than gross, ordinary waking consciousness. These include interior luminosities and sounds, archetypal forms and patterns, extremely subtle bliss currents and cognitions (shabd, nada), expansive affective states of love and compassion..."¹³⁷ This stage is also referred to as deity mysticism because it is often characterized by the appearance of interior illuminations of personal gods, goddesses, or archetypes. The individual begins to transcend identification with the ego-self and identify with their deity.

For instance, a Christian mystic might identify with Christ, while a Hindu might identify with Vishnu, and a Buddhist might identify with Tara, the Bodhisattva of compassion. Wilber points out that "this is not just nature mysticism, not just union with the gross or natural world — what the Buddhists call the Nirmanakaya — but a deeper union with the subtler dimensions of the Sambhogakaya, the interior bliss body or transformational body, which transcends and includes the gross or natural domain, but is not confined to it."¹³⁸

As the gross realm is transcended by the subtle, so too is the subtle transcended by the causal. As the *Causal* stage of transpersonal development again expands, it strips away even more layers of ego-self identity. This stage is often called formless mysticism. It identifies with the Witness, and through the Witness, the inherent emptiness of all reality. Wilber explains that "When, as a

specific type of meditation, you pursue the observing Self, the Witness, to its very source in pure Emptiness, then no objects arise in consciousness at all. This is a discrete, identifiable state of awareness — namely, unmanifest absorption or cessation.”¹³⁹ The perspective of this stage of development transcends the ego-self, identifying wholly with Witness and Emptiness. Again, Wilber clarifies this. “This is the causal state, a discrete state, which is often likened to the state of deep dreamless sleep, except that this state is not a mere blank but rather an utter fullness, and it is experienced as such — as infinitely drenched in the fullness of Being, so full that no manifestation can even begin to contain it. Because it can never be seen as an object, this pure Self is pure Emptiness.”¹⁴⁰

The Emptiness of formless mysticism, the Causal stage, is again transcended by the *Nondual* stage, where even identification with the Witness is transcended, this time washing outward toward the whole of the cosmos, the very Ground of Being. “Technically, you have dis-identified with even the Witness, and then integrated it with all manifestation...”¹⁴¹ Wilber explains further that, “It is beyond nature mysticism, beyond deity mysticism, and beyond formless mysticism — it is the reality or the Suchness of each, and thus integrates each in its embrace. It embraces the entire spectrum of consciousness — transcends all, includes all.”¹⁴² It is the Nondual state of awareness that recognizes only One Without a Second. There is no longer the seer and the seen, subject and object, no inner and outer, no you and it, only the Divine, only Spirit, the Ground of All Being. The world is not two, not many, not separate, but is only Spirit, only Emptiness. The Cosmos is not separate, as we normally perceive. As Wilber eloquently writes, “Real experience, before you slice it up, does not contain that duality — real experience, reality itself, is ‘nondual.’ You are still you, and the mountain is still the mountain, but you and the mountain are two sides of one and the same experience, which is the one and only reality at that moment.”¹⁴³

All this talk about mysticism and perceptions of the universe as one inseparable whole, as Oneness, can seem a little daunting because it is so far from our normal way of perceiving reality. When a Buddhist tells us that the nature of reality is Emptiness, we generally don’t have the foggiest idea what she is talking about. How can the world be empty when there are so many things in it? What they mean, of course, is that the world is empty of inherent existence. They don’t mean that the book you are holding doesn’t exist; they mean that it exists only in relationship with your mind. For instance, when a person is speaking before a crowd, there isn’t one person speaking, but as many as there are minds in the crowd. That person surely exists, but only in relation to the minds that perceive the speaker.

Again, this can be confusing because it isn’t the way we normally look at the world. But then, we haven’t always looked at the world the way we do today. When we were children, we didn’t see the reality of the world the way we do now. We were certain that the moon was following us. If shown two glasses of equal volume, we would insist that the taller glass held more water, even if one glass was poured into the other. We simply didn’t see reality as it is. Nor do we now. We are certain that we are separate from everything else, that the book is a book and that we exist inherently. It can be quite a shock when someone with a deeper spiritual perspective informs us that we only exist in relation to our mind. Don’t believe it? Just try finding yourself.

Are you your body? How about your emotions or memories or thoughts? You can witness all these, can’t you? Buddhists refer to this as No-Self. You are the aggregate of these things, you say? Then how is it you can witness even this aggregate? Then you must be the Witness, so you are something after all. But what witnesses this witness? Where is the separation between Witness and that which is Witnessed? There is none. That’s the joke. We spend all our time trying to be something that we aren’t. At least not in the way that we normally think.

The deeper spiritual realizations do not deny the lower realities — they transcend them. It is not that we are not our bodies; we're simply more than that. It is not that we are not our minds but that we are more than merely our minds. It is not that we are Witness, we are more than merely Witness, we are the Divine, Spirit, the Ground of all Being, One Without a Second. And even if we can grasp this intellectually, it doesn't mean we are experiencing it. A person with a Modern worldview can intellectually understand an Integral one, but that doesn't mean they will perceive reality from an Integral perspective. However, intellectually understanding the realizations and perceptions of the spiritual stages of development will help us slowly grasp them for ourselves, first as sudden insights, and finally as an enduring view of the Cosmos.

Appendix V: A Brief Introduction to Ethics

“The moral law is to be found everywhere, and yet it is a secret...Great as the Universe is, man is yet not always satisfied with it. For there is nothing so great but the mind of the moral man can conceive of something still greater which nothing in the world can hold. There is nothing so small but the mind of the moral man can conceive of something still smaller which nothing in the world can split.”

Confucius, Doctrine of the Mean 12

Before examining the stages of moral development that are available to us ([Appendix VI](#)), it is a good idea to spend some time defining terms. Due to consideration of space, we cannot possibly delve into a full history of ethics, exploring its nuances and contradictions, so these brief definitions will have to suffice. They are fairly general, but if you find that you disagree with them, I hope the point I’m trying to make — that our ethics is part and parcel of our worldview — will not be lost.

What exactly is ethics? The word *ethics* comes from the Greek word *ethos*, which means “character,” and is generally seen as an investigation into the attributes that define human behavior. Usually, ethics is referred to as the study of systems of morals, or as moral philosophy. It can also be used to refer to systems of morals in general, or to a particular system of morals. For my purposes, I will use the word ethics in the latter of these two fashions. When I refer to an Integral ethics or a Spiritual ethics, I am referring to a system of morals characterized by a particular worldview — namely, an Integral or Spiritual worldview.

Mores means “customs” in Latin. By and large, our morals can be defined as our customs — the rules by which we guide ourselves and society, at large. These rules can be construed in a number of ways. They can be silently implied in small groups, like families or clans, and as unwritten rules guiding group behavior, such as in tribal societies. Or they can be presented as part of the larger culture, as in a religion. These rules can take the form of an oral tradition of edicts, or written proscriptions, such as one finds in the Ten Commandments. Additionally, morals can be defined by an interpretation of religious scripture, which has a long, varied history from Babylon to Augustine to the Taliban. Morals can also be specific rules written into the laws that govern a society. Noticeably, as a society changes, the laws which govern it change, altering the moral standing of various actions, while typically, once an action is considered immoral within a religion’s scripture, it takes quite some work for it to be redefined, if ever. Abortion, homosexuality, premarital sex, contraception, and euthanasia are obvious examples of this contrast.

Morals, the rules we use to define appropriate behavior, are informed by virtues. Virtues are the characteristics of human behavior we define as positive and worth aspiring to. Aristotle felt that “...virtue is concerned with passions and actions, in which excess is a form of failure, and so is a defect, while the intermediate is praised and is a form of success... Therefore virtue is a kind of mean, since, as we have seen, it aims at what is intermediate.”¹⁴⁴ Aristotle was concerned with the ideal of harmony in all things, but other cultures could as easily value the virtue of excess, if it served a function within that society. Different societies will have different virtues, and these virtues will reflect that society’s stage of ethical development.

In Alasdair MacIntyre’s *After Virtue*, he discusses why he feels we need a return to the virtue-based ethics of Aristotle. Describing the air of moral debate at the end of the 20th century, he writes: “It is precisely because there is in our society no established way of deciding between these

[ethical] claims that moral argument appears to be necessarily interminable. From our rival conclusions we can argue back to our rival premises; but when we do arrive at our premises argument ceases and the invocation of one premise against the other becomes a matter of pure assertion and counter assertion. Hence perhaps, the slightly shrill tone of so much moral debate.”¹⁴⁵

To counter this, he suggests a return to Aristotle’s moral framework that is based on the concept of virtues. What MacIntyre fails to grasp is that however brilliant he may have been, Aristotle’s worldview, hence his ethics, are completely inadequate to deal with the problems of the world we live in more than two thousand years later. Virtues are wonderful things, and you can espouse all sorts of grand ones (as Aristotle did), but when your worldview condones slavery (to pick one out of a bag of things Aristotle condoned), your ethics is going to prove inadequate to the challenges of the 21st century.

In order to make a judgment about these characteristics, or virtues, we must know what we value. Our value judgments, and our values in general, are informed by our worldview. It is our worldview through which we see the differences between good and evil, right and wrong, desirable and undesirable. When we experience a shift in worldview, we may or may not experience an attendant shift in what we value. What will be different is *why* we value what we do. In this way, a shift in worldview can change what and how we value things, altering our appreciation for various human characteristics, changing what we define as virtuous, amending the rules we call morals, and even our whole system of ethics.

Having defined morals as the rules or customs that guide an individual or a society, morality then becomes a measure of how well the individual, or group, complies with these rules. Of course the rules that individuals create for themselves may be at odds with the rules created by the society they live in. Or, the morals of a particular religion may be at odds with the laws of a given society. This creates conflict, and the resolution of conflict is the domain of justice. Justice is the method by which the rules of society and its morals and laws are enforced. Justice also exists on a personal level as the adjustment necessary to compensate for conflict arising from differences in behavior.

For a truly interesting debate about justice, its meaning, and its implementation, read John Rawls’ *A Theory of Justice* and Thomas Sowell’s *The Quest for Cosmic Justice*, side by side. Rawls argues that justice is, or can be found in, equality, while Sowell argues that the universe inevitably creates inequality and that no laws can rectify this, particularly those created by the liberals he so disdains. As he writes, “There is no way to specify in precise general rules, known before hand, what might be necessary to achieve the results that would meet the standards of cosmic justice.”¹⁴⁶

Sowell is right about the universe creating inequality, but to leave it at that, deride liberal laws of social equality, and to provide no alternative, strikes me as killing a straw man with a straw sword. Which is not to say that I agree entirely with Rawls, who proposes far too many means of creating equality through social structures for my tastes. Regarding justice, he proposes, “...in a provisional form the two principles of justice...First: each person is to have an equal right to the most extensive basic liberty compatible with a similar liberty for others. Second: social and economic inequalities are to be arranged as that they are both (a) reasonably expected to be to everyone’s advantage, and (b) attached to positions and offices open to all.”¹⁴⁷ To which he later adds, “All social values — liberty and opportunity, income and wealth, and the bases of self-respect — are to be distributed equally unless an unequal distribution of any, or all, of these values is to everyone’s advantage. Injustice, then, is simply inequalities that are not to the benefit of all.”¹⁴⁸

One of the things Rawls fails to appreciate is that the universe is hierarchical as well as heterarchical, and that inequality is often not only necessary, but also a driving force for change and growth. An integral justice should learn to value both equality and inequality, eliminating hierarchical systems that promote pathological inequality as well as those systems that encourage equality to the point of bland monism.

It is impossible to discuss ethics without examining, in some manner, the notions of good and evil. As our ideas of good and evil will be informed by our ethics (and our ethics shaped by our worldview), it will be necessary to try and define an Integral, and later Spiritual, conception of these eternal concepts. St. Thomas Aquinas wrote that, "...Evil indicates the absence of good. But not every absence of good is evil. For absence of good can be taken in a privative and in a negative sense. Absence of good, taken negatively, is not evil; otherwise it would follow that what does not exist is evil, and also that everything would be evil because of not having the good belonging to something else."¹⁴⁹

The notion of good and evil changes with shifts in worldview. This change is centered on the ego-self. At earlier stages of development, the ego-self, or what it desires, is the primary concern, and good can be defined as that which assuages these desires, while evil is that which thwarts them. As an individual progresses through the stages of development, identification with the ego-self becomes less central. As the ego-self becomes stronger, it has less need to worry about its own desires. In essence, evil becomes that which satisfies the desires of the ego-self at the expense of others. Good, then, becomes the satisfaction of all desires, regardless of whose ego-self they placate, as long as they bring no harm. This is progressively truer as an individual advances through the stages of development.

Spiritual ethics, on the other hand, is based in a worldview that is transcending the ego-self, and thus has a different view of good and evil. A Spiritual worldview, to rob from Nietzsche, is beyond good and evil. This does not mean a Spiritual ethics denies that evil can be done. Swami Prabhavananda and Christopher Isherwood describe it this way: "Vedanta agrees that evil, in the absolute sense, is unreal. But it reminds us that, from this standpoint, good is unreal also. The absolute Reality is beyond good and evil, pleasure and pain, success and disaster. Both good and evil are aspects of Maya [the world of thought and matter which ultimate spiritual realization reveals as illusory]. As long as Maya exists, they exist. Within Maya they are real enough."¹⁵⁰

Our actions, good, evil and neutral, are motivated by our virtues, defined by our community morals, and constrained by our community justice, and therefore have consequences. These consequences can be thought of as our karma. Karma is often misunderstood in the West as fate or destiny and is associated almost completely with reincarnation. Although it is a central component of many religions that believe in reincarnation, I use the term strictly with a corporeal intention. Karma is an acknowledgement and direct understanding of the interconnectedness of all existence. As it says in the Buddhist Sutta Nipata, "The world exists because of causal actions, all things are produced by causal actions and all beings are governed and bound by causal actions."¹⁵¹ We are all tied together by our actions and their ramifications. This is karma.

In many ways, the Integral worldview is an acknowledgement of the concept of karma and an attempt to live and act through that understanding. The Cosmos is interconnected and intermeshed. Our actions have not only immediate effects but effects which result in actions, which result in effects, which result in actions, and so on and so on. The central import of this for the affairs of humans, particularly for ethics, is that actions taken in ignorance of the karmic relationship between causes and effects will most likely result in worse, rather than better, situations. Actions taken in appreciation of karma and unclouded by ignorance, particularly by the selfish sense of

separateness that dominates the ego-self at earlier stages of development, will more likely result in positive situations. The understanding of this principle is a central component to any future Integral ethics.

Appendix VI: Stages of Moral Development

Just as there are stages of personal development that unfold as particular worldviews, there are stages of ethical development that we also pass through. Our worldview defines how deeply we look at the world and how wide we cast our perspective in attempting to understand our lives. The more of the world we are able to consider, the more of it we will be able to take into account when making ethical decisions. As philosopher Jurgen Habermas writes, “The correlation between levels of interactive competence and stages of moral consciousness means that someone who possesses interactive competence at a particular stage will develop a moral consciousness at the same stage, insofar as his motivational structure does not hinder him from maintaining, even under stress, the structures of everyday action in the consequential regulation of action conflicts.”¹⁵²

Psychologist Lawrence Kohlberg, and those researchers who follow his work, have collected a significant body of evidence to indicate that there is a moral stream running through the stages of personal development. Kohlberg believes that “...we begin life with an egocentric point of view and, through cognitive development owing both to our endeavor to resolve increasingly more complex conflicts and to our capacity for sympathy, come to have an increasingly genuine altruistic or other-regarding moral perspective...”¹⁵³ Another psychologist, Carol Gilligan, has refined Kohlberg’s work to delineate the ways men and women approach the stages of moral development. In general, men focus on rules, rights, and the ideas of justice while women tend to think in terms of relationships, care, and responsibilities.

Presented with a moral dilemma, men and women at the same stage of development will tend to behave in the same manner, but they will do so for different reasons. These different ways of processing moral questions can create conflict between men and women. For a number of years, it meant that in a field dominated by male psychologists and philosophers, women’s ethics, their way of engaging a moral question, was assumed to be dysfunctional, or was simply ignored. Gilligan explains this conflict succinctly: “Thus it becomes clear why a morality of rights and noninterference may appear frightening to women in its potential justification of indifference and unconcern. At the same time, it becomes clear why, from a male perspective, a morality of responsibility appears inconclusive and diffuse, given its insistent contextual relativism.”¹⁵⁴

Kohlberg outlines six stages of moral development, each successive stage embracing a wider acceptance of the importance of others in relation to the ego-self. “Individual development in moral reasoning is a continual differentiation of moral universalizability from more subjective or culturally specific habits and beliefs...” to those that are more encompassing and less centered on the ego-self.¹⁵⁵ Kohlberg divides his six stages into three larger levels he refers to as pre-conventional, conventional, and post-conventional, which can correspond roughly to childhood, adolescence, and adulthood.

The first stage is focused on “...punishment and obedience. One obeys in order to avoid being punished...” At *the second stage*, “One’s objective is to do what one can to advance one’s own interests while acknowledging that others have interests.” With *the third stage*, “The expectations of others become important to one. The concerns of one’s group can take primacy over one’s own interests.” *The fourth stage* of moral development finds us “...loyal to one’s social institutions. Doing what is right means fulfilling one’s institutional duties and obligations.” *The fifth stage* “...acknowledges that there is a rational perspective according to which there are values and rights — such as life and liberty — which do not owe their importance to social institutions, and which must be upheld in any society.” *The sixth stage* is one “...of universal ethical principles that all should follow, and which take priority over all legal and other institutional obligations.”¹⁵⁶ These

six stages of moral development agree substantially with Kegan's stages of personal development, especially the final three stages of each.

Appendix VII: Complexity and Complex Systems

Systems theory, complexity theory, network theory and the like are new paradigms, new tools that can be used to understand the universe, but they are not new worldviews. They are methods that can be used to see the world in a deeper fashion, but they are not the insight itself. Think of different paradigms as colored lenses placed before your eyes. The dark blue lets you see the sky in ways you hadn't while the yellow makes the shadows of the snow more visible. Complexity theory doesn't replace the paradigms that preceded it but instead adds an extra layer of depth to our understanding.

Complexity theory is a relatively new branch of science that looks at nonlinear adaptive systems, or complex systems. Much of this research has been conducted by the faculty of the Santa Fe Institute, which was founded by complexity theorists Murray Gell-Mann and John Forman in the late 1980s. To begin to understand complexity theory we need to understand the difference between the terms complex and complicated. Paul Cilliers does a wonderful job of explaining this in his book, *Complexity and Postmodernism*:

“Firstly, it is useful to distinguish between the notions ‘complex’ and ‘complicated’. If a system — despite the fact that it may consist of a huge number of components — can be given a complete description in terms of its individual constituents, such a system is merely *complicated*. Things like jumbo jets or computers are complicated. In a *complex* system, on the other hand, the interaction among constituents of the system, and the interaction between the system and its environment, are of such a nature that the system as a whole cannot be fully understood simply by analyzing its components. Moreover, these relationships are not fixed, but shift and change, often as a result of self-organization. This can result in novel features, usually referred to in terms of *emergent properties*. The brain, natural language and social systems are complex.”¹⁵⁷

As Cilliers points out, complex systems need to be understood in the context of the whole rather than by analyzing their constituent parts. Fritjof Capra writes, “The great shock of twentieth-century science has been that systems cannot be understood by analysis. The properties of the parts are not intrinsic properties but can be understood only within the context of the larger whole...Accordingly, systems thinking concentrates not on basic building blocks, but on basic principles of organization. Systems thinking is ‘contextual,’ which is the opposite of analytic thinking. Analysis means taking something apart in order to understand it; systems thinking means putting it into the context of the larger whole.”¹⁵⁸

Complex systems are all around us. As M. Mitchell Waldrop describes, “...the economy is an example par excellence of what the Santa Fe Institute had come to call ‘complex adaptive systems.’ In the natural world such systems include brains, immune systems, ecologies, cells, developing embryos, and ant colonies. In the human world they include cultural and social systems such as political parties or scientific communities.”¹⁵⁹

Complex systems can be found all everywhere, but are very different from the more inert systems that are merely complicated. As Waldrop continues to explain, “Whenever you look at very complicated systems in physics or biology...you generally find that the basic components and the basic laws are quite simple; the complexity arises because you have a great many of these simple components interacting simultaneously. The complexity is actually in the organization — the myriad possible ways that the components of the system can interact.”¹⁶⁰

This interaction is the key to complex systems. The greater the level of interaction, the greater the possibility it will organize to new levels of complexity. On the other hand, if there is too much connection, too much noise, the systems can disintegrate into chaos. Likewise, if there is too little connectivity, the systems can be bogged down in order and lose adaptability. This point between order and chaos is commonly called the “edge of chaos.” The “edge of chaos” is that sweet spot between order and chaos where novelty arises.

Imagine for a moment a system of information, like the shared DNA of a bacteria colony. The information in the system can be represented by a bell curve. Too ridged, or limited, a field of information and the system stagnates in the face of adversity. Too much information in the face of adversity and the system falls into chaos. The “edge of chaos,” where emergent properties arise, is on the cusp of the bell curve, where there is enough information to spark novelty, but not so much that the system falls apart; enough order to support this novelty, but not so much as to retard its development.

Complex adaptive systems, or non-linear adaptive systems, have several properties. First, “...each of these systems is a network of many ‘agents’ acting in parallel.” These agents are “...constantly acting and reacting to what the other agents are doing.” Second, “...the control of a complex adaptive system tends to be highly dispersed. There is no master neuron in the brain, for example, nor is there any master cell within the developing embryo.” Furthermore, “...a complex adaptive system has many levels of organization, with agents at any one level serving as the building blocks for agents at a higher level.” These holarchies are “...constantly revising and rearranging their building blocks as they gain experience.” Additionally, “...all complex adaptive systems anticipate the future.” Lastly, they “...typically have many *niches*, each one of which can be exploited by an agent adapted to fill that niche.”¹⁶¹

In his book, *Global Brain*, Howard Bloom defines five key elements of living and social non-linear networked systems, or complex adaptive systems, such as human bodies and human communities. These elements are: *conformity enforcers*, *diversity generators*, *inner-judges*, *resources shifters*, and *intergroup tournaments*. He describes *conformity enforcers* as those parts of a system that “...stamp enough cookie-cutter similarities into the members of a group to give it an identity, to unify it when it’s pelted by adversity, to make sure its members speak a common language, and to pull the crowd together in efforts sometimes so vast that no single contributor can see the larger scheme in its entirety.”

He goes on to define *diversity generators* as those aspects of a system that create variety. He explains that “Each individual represents a hypothesis in the communal mind. You can see this in one of nature’s most superb learning machines, the immune system...Among human beings, different personality types also embody approaches which, while they may not be necessary today, could prove vital tomorrow.”

Furthermore, Bloom writes, *inner-judges* “...are biological built-ins which continually take our measure, rewarding us when our contribution seems to be of value and punishing us when our guesswork proves unwelcome or way off the mark...Our inner-judges are sometimes generous, but are often far from kind. Yet inner-judges are critical to complex adaptive systems from those of single-celled creatures to those made up of human minds.”

He explains *resource shifters* as ranging from social systems to mass emotions, “...but all have one thing in common — they shunt riches, admiration, and influence to learning-machine members who cruise through challenges and give folks what they want. Meanwhile, resource shifters cast individuals who can’t get a handle on what’s going on into some equivalent of pennilessness and unpopularity. Jesus captured the resource shifter’s algorithm — its working rule

— when he said, ‘To he who hath it shall be given; from he who hath not, even what he hath shall be taken away.’” Finally, Bloom explains, *intergroup tournaments* “...force each collective intelligence, each group brain, to churn out innovations for the fun of winning or for sheer survival’s sake.”¹⁶²

There is a great deal more to complexity theory, but to explore it in full would be an unnecessary digression from the main point of the book. However, a cursory understanding of complexity will help a great deal in comprehending the Integral perspective that the book explores. Complexity theory is a useful tool for the Integral perspective, allowing us to examine the whole of the complex systems we rely on in context of their parts and relationships with other complex systems.

For instance, complexity theory will help us understand the relationship between such systems as global weather, local and national ecologies, and national and global economies. It also provides us with a conceptual framework to begin addressing some of the problems we encounter in these systems.

However, it should be noted that complexity theory is still in its infancy in many ways. As Albert-Laszlo Barabasi writes in the conclusion of his book *Linked: The New Science of Networks*, “In the twentieth century we went as far as we could to uncover and describe the components of complex systems. Our quest to understand nature has hit a glass ceiling because we do not yet know how to fit the pieces together. The complex issues with which we are faced, in fields from communications systems to cell biology, demand a brand new framework.”¹⁶³ Network theory is helping to provide that framework and illuminate the deeper structures of complexity in our world.

Appendix VIII: A Brief Introduction to Mediation

“Do not follow the ideas of others, but learn to listen to the voice within yourself. Your body and mind will become clear and you will realize the unity of all things.”

Zen Master Dogen (Quoted from *Teachings of the Buddha*, Jack Kornfield, p. 155)

Mediation is the one, true, time-proven means of transcending our limited sense of self and awakening to our Genuine Self. As such, hopefully you can take the time to make it a daily part of your life. The following practices are from a secular meditative practice.

There are many different forms of meditation, and you should take the time to explore them to see which is best suited to your own nature. All major religions have some meditative or contemplative practice, but do not be surprised if the style of meditation most appropriate to your needs is found outside your particular faith. If you do not have a particular faith, there are several secular meditative approaches. Though the meditative practice you settle on may vary, the following has five clear stages. For the first several weeks, I would suggest practicing only the first two stages, adding each progressive stage as it seems natural.

Settling In: Make sure you are in a quiet place and are seated comfortably. Wear unrestrictive clothing, and remove all possible distractions. Position yourself so that you are comfortable. Stretch a bit if you need to. (You’ll definitely want to after meditating.) Do not lie down, as you will probably fall asleep. You can sit cross-legged, or place one foot on the opposite calf and the other below it. If you are flexible, you can sit in the classic lotus position.

Stilling the Mind: Close your eyes and breathe. Breathing is essential. Breathe slowly — from the diaphragm first, and then the lower lungs, and finally the upper chest. Do not hold your breath. Exhale slowly. Focus on your breath. The word *spirit* comes from the word *inspire*, to inhale, to breathe. That is probably no mistake.

As you breathe, try to keep your mind clear. This will be difficult at first. Try focusing your mind on a single thing, like a word or a mantra that you repeat silently to yourself as you breathe in and out. Or focus by counting your breaths. If your mind strays, bring it back to the task at hand. Some good words to combine with breathing to still the mind are: Love/Peace, Compassion/Grace, Breathe/Be. With breathing, they are like this: Love (in), Peace (out), Breathe (in) And Be (out), etc.

You can also choose a phrase and divide it with breaths. “All is one” (in-breath), “in Spirit” (out-breath). Christians may choose to use the Orthodox Jesus prayer: “Lord Jesus Christ, Son of God, have mercy on me.” If you prefer a Buddhist influenced mantra there is always the repetition of the phrase “Om Mani Padme Hum,” which (from Sanskrit) is sometimes translated as “Jewel in the Lotus” and is an aspirational mantra to attain an enlightened mind. The shorter, Hindu mantra word “Om” or “Aum” can also be used, this word essentially meaning the highest expression of God, and/or the very sound of the universe’s birth.

Do not be frustrated if stilling your mind takes some time and practice. Our minds are like restless children or antic puppies. Rarely are they willing to quiet down and focus on one thing if it is not bright, colorful, and engaging. Mediation, on the other hand, is about silence, stillness, and absence. Do not be surprised if the day’s highlights or complications flash before you. Often, all of your worldly concerns will try to crowd your mind at once. Let them go. They will be there when you are finished meditating, and you most likely will have a newfound perspective on them. The key to mediation is persistence.

Riding the Wave: When you come to the point where you can focus *at will* for an extended period of time, begin to focus on nothing. Stop counting or repeating your mantra and just focus on your breathing. Then release that concentration and leave your mind empty for as long as you can. When a thought crosses your mind do not attach yourself to it. Simply note it and return to your state of empty mind.

Witness your mind. That which can be witnessed is not the Witness. Witness your body. You are more than merely your body. Witness your emotions. You are more than merely your emotions. Witness your memories and thoughts. You are more than merely your memories and thoughts. You are Witness. You can think of this as riding the wave — the gentle breathing in and out being like the waves of the ocean flowing in and out against the shore.

Becoming the Ocean: It will probably take some time before you reach a stage where you can meditate at this Witness state for more than a short period of time. Stick with it. Abiding in Witness, you cease to think of riding waves of breath and you instead become the wave, become the ocean from which all awareness emanates. As your practice deepens, allow your awareness to move ever outward. First, let your awareness of your breathing and heartbeat be present. Then, allow your awareness of your body and the room you are in to fill you. Then extend that slowly, ever farther, until you are aware of the universe as an ocean and yourself as a drop in that ocean.

As you continue your meditative practice, this state of pure Witness will become easier to obtain. You will also be able to stay in it for longer periods of time. Do not be frustrated if, at first, there are only glimpses. This is only natural. If you lose focus, return to your mantra, or count your breathing until your mind is quiet again.

After many months, or in some case years, of meditating at this level you may begin to experience what are commonly referred to as “internal visions.” You may see bright or colorful lights, you may hear sounds, noises, and in some instances, even voices. You may see scenes from your life, moments of great pain and trauma or of great joy and happiness. You may also see imagined images of heaven or hell, the Buddha, Jesus, or other religious figures. The exact nature of these internal visions will depend on the individual and the sort of life they have led. They are not to be feared and they are not to be relished. They are nothing more than signposts on the way toward spiritual fulfillment.

For many meditators, however, they become sand traps. It is all too easy to get carried away and believe that these internal visions somehow relate directly to external reality. They are interior realities that can either point to spiritual truths or to the last remnants of ego-bound fantasy. They often point to psychological or emotional issues that we have left unresolved and must attend to before proceeding along the spiritual path. The safest and most mature response to internal visions is to acknowledge them, accept them, possibly even interpret them, but largely to ignore them and continue meditating because eventually, they will pass, and when they do, the state you will be resting in will be pure consciousness, pure Spirit.

Blessing the Universe: As a closing, after meditation proper, I suggest using variation on the loving-kindness blessing from Tibetan Buddhism to help center yourself in a concrete way to the world you live in. The blessing is very simple and can be altered to suit your needs. It begins with the phrases “May all beings have love and peace. May they be free from suffering and its causes.” Then repeat this blessing for each person you know, inserting their name instead of “all beings.” It is especially helpful to use this blessing when in conflict with someone. Simply bless them repeatedly. You may be surprised at the effect this has. The blessing can also be used for people you don’t know, and for the world, or even the universe-at-large. The idea behind the blessing is not that your words and thoughts can affect the world-at-large, but that they have an overwhelming

effect on your own mind, thoughts, and emotions. Through you, these blessings can directly affect the world as you engage those in your life.

Walking Meditation: If you are feeling stiff or are meditating for a long period of time, you can try a walking meditation. You do exactly what you would while sitting, but walk slowly and mindfully in a circle, paying close attention to each step and the movement of your body. You can also do a walking meditation when there is little time for a sitting. If you must walk to work, or to class, or to the mailbox, use this as an opportunity to meditate.

Hindrances: Lastly, some mention of the common hindrances to meditation is in order. The following eight hindrances are taken from the Buddhist tradition, but they are fairly representative of the problems encountered with all meditative paths. The primary hindrances are *desire, anger, fear, boredom, judgment, sleepiness, restlessness, and doubt*. All of these things are the mind's ways of distracting us from the task at hand. The way to work through these distractions is to acknowledge them, becoming aware and mindful of them. One technique is to name them very softly to yourself when they arise. When you find yourself wanting something, desiring something like a cold drink, simply name this softly to yourself, "desire." Likewise, when you feel anger at how long it is taking you to reach a calm state of mind, or fear that you're not meditating properly, or you find your mind wandering idly, name these things. And when you begin to judge yourself about how well you are doing, or you begin to feel drowsy, or your muscles begin to ache and you want to move, name these things softly to yourself. In naming them, you will become aware of them, and allow yourself the opportunity to be present in the experience of them, and in their passing.

Appendix IX: A Brief Introduction to the Philosophy of Religion

Does God exist? What is the nature of God? Why is there suffering and evil? Is there an afterlife? These are only a few of the fundamental questions that the philosophy of religion seeks to explore. The philosophy of religion attempts to use logic and reason to discern the validity of various truth claims made by religion. Largely a product of Western society and culture, the philosophy of religion is a branch of philosophical inquiry traditionally concerned with Christian, and by implication, Jewish and Islamic, conceptions of God. Modern and contemporary philosophers of religion have expanded the scope of these inquiries to include other world religions, spirituality, and issues of race and gender.

The Nature of God

What is God like? Is God a being or the Ground of All Being? Is God omniscient or omnipotent or both? In the Western philosophical tradition, the god that is examined is the god of the Jewish and Christian traditions, although largely from the Christian perspective. This god is conceived of as a singular being responsible for the creation of the entire universe. This god is also generally considered to be omnipotent, (all powerful), omniscient (all knowing), and omnibenevolent (all caring).

Belief in this sort of singular creator god is called monotheism. Belief in a god in general, although not necessarily as describe by monotheism, is called theism. By contrast, atheism rejects the possibility of any god's existence, because such existence cannot be proven in the empirical manner of science (gods cannot be seen, heard, or pointed to). Agnosticism takes the position that the existence of any god can be neither proven nor disproven and, so the question of what such a god is or is not must remain unanswered. Other religious belief systems allow for polytheism, or the belief in many gods.

Many ancient religions, such as those followed by the Greeks, the Egyptians, or the Mayans, held a belief in multiple gods, each a supernatural being in its own right, usually with a designated realm of influence such as war, the weather, the ocean, or the sky. The multiple gods of Hinduism, on the other hand, are held to all be the expression of the Ultimate Reality, known as Brahman. Furthermore, pantheism is the belief that God is imminent in the universe; in other words, all that is seen in the physical universe is God. The belief that God is both imminent and transcendent, both within and beyond the universe, is called panentheism.

The Existence of God

As Immanuel Kant (1724-1804) noted in his *Critique of Pure Reason*, there are three proofs within the philosophy of religion for the existence of God (as generally conceived by Christian and Jewish monotheism). These are: proofs based on reason alone, proofs based on existence of the universe, and facts based on particular features of the universe.

Proofs based on reason alone, rather than observation of the world are called *the ontological argument*. First proposed by St. Anselm (1033-1109), the Archbishop of Canterbury, in his

Proslogion, the argument states that God must exist because God is “that which no greater can be thought.” In essence, Anselm is saying that God is the greatest being that can be conceived, and that God can be conceived of as either existing or not existing, and since existence is a greater state of being than non-existence, God must therefore exist. A contemporary monk named Gaunilo, was not convinced, saying that simply because you could imagine something as perfect, does not mean it exists. One could imagine a perfect island, but that does not mean the perfect island would exist. Anselm countered that God and an island are two completely different categories, as islands are not perfect by definition, while God, by definition is.

St. Thomas Aquinas (1225-1274) later countered the argument by saying that existence is not a perfection. Therefore, while a connection might be established between God and existence, that connection cannot prove that God exists. Rene Descartes (1596-1650) disagreed with Aquinas, saying that by “God” we mean a supremely perfect being, and that existence is, “a certain perfection,” therefore God must exist and to deny this would be to contradict oneself. Kant is thought to have finally refuted the ontological argument by pointing out that it improperly assumes that existence is a property that things possess, like color, or size, or shape. Existence, does not add anything to a concept. If something exists, it simply means that it conforms to the concept of it. The concept cannot contain or define the object’s existence.

At the heart of *the cosmological argument* is the question, “Why does something exist rather than nothing?” There are two versions of this argument, the first proposed by the Islamic philosophers Al-Kindi (9th century) and Al-Ghazali (1058-1111). Commonly called the Kalam argument, it essentially states that since all things have a cause, a beginning, and our universe must have a first cause, only God could conceivably constitute that first cause. The second formulation of this argument as put forth by St. Aquinas states that everything that moves must have a mover, or everything has a cause, which in turn is moved or caused by something else. Furthermore, while we can imagine infinity, there can be no real infinite chain of movers and moved, or an infinite number of causes; there must ultimately be an unmoved mover as the first mover of all movement, and an uncaused cause as the source of all causes. By movement and cause, Aquinas means change, and only God could be the original source of the chain of movement, cause, and change that created all that we observe as our universe.

David Hume (1711-1776) objected to these arguments reasoning that we can only make statements about that which we can experience and since we have no evidence of a first cause of the universe, and since that cause would have taken place outside time (which began with the universe) we can say nothing decisively about how the universe came to be. While modern physicists have deduced the universe to be roughly 13.5-14 billion years old, they have not yet proposed a cause for the initial Big Bang from which the universe was spawned. Current theory holds that the universe came into existence from a singularity, a point of matter so densely and infinitely compressed as to be beyond the normal rules of physics. Interestingly, in agreement with modern science, it was St. Augustine (354-430) who suggested that the universe came into existence simultaneously with time.

The third argument for the existence of God is called *the teleological argument*. The word ‘teleos’ means ‘end,’ or ‘purpose’ and the teleological argument is concerned with final state of the universe and how it came to be. The best known example of the argument was suggested by William Paley (1743-1805) in which he states that if we were to find a watch and examine its compositional workings closely we would have no choice but to conclude that the watch had a designer, because if any piece of the watch were altered slightly, the entire thing would cease to function. Similarly, Richard Swinburne (b. 1934) states that just as the best explanation for the

existence of a painting or a work of art is the existence of an artist who created it, the best explanation for a universe so complex and expansive is God. David Hume objected to this line of reasoning pointing out that human-made things like watches or paintings are not the same as natural things. Moreover, if there were a designer of the universe it would seem to have been an unskilled designer, for how else how could one account for such significant flaws as evil?

Charles Darwin's (1809-1882) Theory of Evolution explained how random mutation and natural selection through competition and cooperation could give the appearance of design in the natural world. Further advances in evolutionary science have made the argument for a designer of human beings even less plausible. Proponents of the modern presentation of the teleological argument, known as Intelligent Design, believe the biggest hurdle for evolutionary science to explain is the shift from inanimate matter to life. While there is no consensus among scientists to explain abiogenesis, as it is called, most suggest that under the right circumstances different inanimate systems could come together to function as a primitive living organism.

In summary, while there are several philosophical methods for attempting to prove the existence of God, especially as conceived of by the Christian faith, each of these arguments has also produced persuasive counter arguments that negate them. Since no empirical or scientific method has ever been devised to establish the existence (or conclusive non-existence) of a supreme being of the nature implied by the word 'God', belief or disbelief in this being's existence is ultimately a matter of personal philosophy and faith.

The Experience of the Divine

For the religious, one of the most compelling arguments for the existence of God comes from experience of God or the Divine. Richard Swinburne has argued on the basis of *the credulity principle* that individual experience of God is acceptable proof of God's existence. The credulity principle states that if a person perceives an object, then in all likelihood, that object exists. If you perceive a tree then in all likelihood that tree exists, (unless you are hallucinating or dreaming). Likewise, the credulity principle suggests that if you experience God, then in all likelihood, God exists. Atheists counter that the credulity principle works both ways; if God is not experienced, then in all likelihood, God does not exist. The argument for God based on experience is also complicated by the variety of experiences of God, as well as the conceptions of God, from one culture to the next. If God exists as a singular being, how can God be perceived so differently by so many people? One possible explanation for this lies in *the perennial philosophy*.

The perennial philosophy was first outlined by philosopher Gottfried Leibniz (1646-1716), and famously later explored by Aldous Huxley (1894-1963) in his book *The Perennial Philosophy*. In general, the perennial philosophy suggests that the core religious experiences, especially the mystical experiences, described by the majority of the world's religions throughout time contain such a great deal of similarity that the most reasonable explanation for this concurrence is that they are all describing the same universal experience. The most common experience cited is the mystical union with the divine in which the religious practitioner, or mystic, perceives their own sense of selfhood dissolve into a greater sense of union with all existence, particularly all existence as a manifestation of the Divine.

If instead of experiencing a divine being, those who are having religious experiences are instead experiencing a Divine force, or a Divine Ground of All Being, then that experience would be interpreted through that person's cultural, social, and personal filters, and would result in different descriptions of the same or similar experience. This would be like two people experiencing a painting or film and describing it differently. Atheists argue that there is no clear

correlation between reported experiences of God (personal being) or the Divine (impersonal Ground of Being), by different religions or mystics. The counter argument is that these experiences are usually the result of deep meditative or spiritual practices and if those who participate in them regularly proclaim to have similar experiences, then we can conclude that in general these perceptions are valid. Furthermore, it is not surprising that those who do not engage in the practices do not have the experiences.

Good and Evil

A common argument for the non-existence of God by reason of the existence of evil is called *theodicy*. Theodicy is essentially the proposition of a paradox in which the existence of an omnipotent, (all powerful), omniscient (all knowing), and omnibenevolent (all caring) God is a logical impossibility because the existence of evil presupposes any supreme being's ability to possess all three characteristics. In other words, God can be all knowing and all powerful, but the existence of evil would suggest that God could not be all loving. An all loving God would be presumed to act to prevent evil. Or conversely, God could be all loving, but only either all powerful or all knowing. If God was all powerful but not all knowing, then God would not be able to prevent evil. If God were all knowing, but not all powerful, God would also be unable to prevent evil.

Leibniz, who also coined the phrase theodicy, attempted to disprove it by suggesting that God has created the best of all possible worlds and that evil and suffering are unfortunate necessities within that world. In the eastern philosophies of both Buddhism and Hinduism, notions of evil and good ultimately are seen as being illusions. For these religions or philosophies, the ultimate nature of reality, what western philosophy would call an impersonal pantheistic version of God, transcends all dualities like good and evil. Evil is true enough in a conventional sense, but from the viewpoint of Ultimate Reality, each person and thing is a manifestation of the Divine (Emptiness in Buddhism and Brahman in Hinduism). While someone's conventional nature or ego-self, may be expressed by causing suffering or evil, their ultimate nature is Divine and therefore beyond any duality of good and evil. It is also possible to view evil, or the causing suffering to others, as a product of free will and a distortion of the ego-self; an inability to consider the welfare of others. Suffering from natural disasters and illness would then not be considered evil, but simply natural occurrences. This scenario presumes a God that neither takes part in directing human actions and affairs or in determining the state of the natural environment.

The Soul

All most all known religions posit the existence of a soul or essential essence that is in union with the physical human body but which is eternal and survives the physical death of the body. Some cultures even postulate multiple souls, each associated with a different region of the body. The soul is sometimes believed to be entwined with the mind or consciousness as the seat of the sense of self, including memories, desires, and thoughts. Greek philosopher Plato (428-348 BCE) believed the soul to be the immaterial and eternal seat of self which would be reborn in another body after death. He also suggested that the soul had three parts: logos, or mind; thymos, or emotion; and eros, or desire, all three of which needed to be in balance. In contrast, Aristotle (384-322 BCE), while accepting Plato's definition of the soul as the essence of a human being, did not believe that the soul was necessarily either separate or eternal. To Aristotle, the soul was the first actuality of the body, or the body's reason for existence.

Ancient Judaism held no particular beliefs about a soul, none being mentioned in the Torah. Later rabbinical scholars, particularly those in the Middle Ages like Maimonides (1135-1204), suggested a belief in the soul as the refined human intellect beyond physical substance. The Jewish mystical tradition of Kabbalah later proposed an eternal soul that developed in stages and could survive death. Christian ideas for the soul were more influenced by the Greek philosophy of Plato and Aristotle than by Judaic theology. Early Church philosophers like St. Augustine believed the soul to be a special substance that controlled the body. Later philosophers like St. Aquinas, considered the soul to be the seat of reason, following Aristotle, but held it to be both immaterial and eternal.

Not all Christian sects assume the soul to be eternal, some believing that it ceases at death and is resurrected with the body by God at the end time, or final judgment, after the return of the messiah. The soul is also accepted as part of Islamic theology, having been famously explored by Avicenna (980-1037), a Persian philosopher in his “floating man” thought experiment where he suggests that if we imagine ourselves secluded from all sensory or physical experience that we can still imagine the experience of self-awareness. He concludes that self-awareness is not dependent upon physical existence and must exist separate from the body.

Unlike Western and Middle Eastern faiths, Hinduism and Buddhism do not suggest a soul that contains the thoughts and memories of people. In Hinduism a *jiva* is an embodied soul, but the true nature of the soul is *atman* and is ultimately not separate from Brahman, (the Ultimate Reality). The soul is re-embodied, or reincarnated, after death, with the imprints of the body’s actions, or karma, but not its memories or personality. Similarly, in Buddhism the *doctrine of no-self* suggests that not only is the gross mind non-existent in a conventional sense, but that as all things are changing and impermanent, it is non-existent in an ultimate sense. Buddhists also believe in reincarnation, but it is the *very subtle mind* which passes from life to life with the imprints of karmic actions, while the gross mind with its ego-self and memories is destroyed at death.

Death and Afterlife

Nearly all religions have some sort of belief in an afterlife. These beliefs fall into three general categories. The first, which is followed by many ancient religions and indigenous peoples, suggests that the souls of people survive death and remain in the vicinity of their families as spirits who can be helpful or harmful depending upon their relationship to, and concern for, the living. The second form of afterlife, as espoused by Hinduism, Jainism, Buddhism, and others, suggests that some essence of humans, whether a soul or a very subtle mind, passes on to be reborn on another human body. The third form of belief in an afterlife, held by most Christians and Muslims, suggests that the human soul, in full possession of its personhood, passes after death to another realm of existence, often to be judged for its actions while alive and either punished or rewarded. A few religions, such as early Judaism and some later Jewish Reform and Reconstructionist movements, make no claims for an afterlife, and do not speculate about existence after death. Atheism holds that the end of a human body’s life is the end of personal consciousness and experience.

Religion and Science

Science, the study of nature through the evaluation of empirical evidence, has created numerous conflicts within different religions and their theologies. Nearly all religions make theological claims that cannot be supported by empirical evidence, or which are in direct contradiction of commonly accepted scientific facts. These conflicts largely involve the central questions of the

philosophy of religion and include: the existence or non-existence of God, the nature of the origin of the universe and human life on earth, the possible existence of a human soul, and the possible existence of life after death. Religious claims for the existence of God, a human soul, or an afterlife are dismissed by science because these claims cannot be falsified, or proven based on any empirical evidence. Various religious explanations for the origins of the universe and human life are dismissed because they directly contradict scientific explanations based on physical evidence and the long proven theories of cosmological and biological evolution. Evolutionary scientist Stephen J. Gould (1941-2002) suggested that science and religion are *non-overlapping magisteria*, each concerned with fundamentally different realms of inquiry; science dealing with the facts of the universe and theories for why it functions the way it does, and religion dealing with morals and metaphysical questions outside the realm of facts. Some religious leaders, including H.H. The Dalai Lama (b.1935), have suggested that where science is conclusive in its explanations, religion must change to accommodate these truths.

Resources and Readings:

Website: www.philosophyofreligion.info

An Introduction to the Philosophy of Religion, Brian Davies, Oxford University Press, 2004

Philosophy of Religion: A Guide and Anthology, Brian Davies, Oxford University Press, 2000

Stages of Faith, James Fowler, HarperOne, 1995

Philosophy of Religion: Selected Readings, Michael Peterson, Oxford University Press, 2000

Why Religion Matters, Huston Smith, HarperOne, 2001

Philosophy of Religion: An Anthology, Charles Taliaferro, Wiley-Blackwell, 2003

Teach Yourself Philosophy of Religion, Mel Thompson, McGraw-Hill, 2007

Oxford Handbook of the Philosophy of Religion, William Wainwright, Oxford University Press, 2007

God: A Guide for the Perplexed, Keith Ward, One World Publications, 2005

An Abbreviated Bibliography

- Appiah, Kwame Anthony. ed. 1997. *The Dictionary of Global Culture*. Alfred A. Knopf.
- Barabasi, Albert-Laszlo. 2002. *Linked: The New Science of Networks*. Perseus Books Group.
- Barber, Benjamin R. 2001. *Jihad vs. McWorld*. Ballentine Books.
- Barlow, Maude. 2001. *The Free Trade Area of the Americas*. International Forum on Globalization.
- Bauman, Zygmunt. 1998. *Globalization: The Human Consequences*. Columbia University Press.
- Barabasi, Albert-Laszlo. 2002. *Linked: The New Science of Networks*. Perseus Publishing.
- Arthur, W. Brian, et. al. 1997. *The Economy as an Evolving Complex System*. Willow Press.
- Beck, Don and Cowen, Christopher. 1996. *Spiral Dynamics: Mastering Values, Leadership, and Change*. Blackwell Publishers Ltd.
- Best, Steven and Kellner, Douglas. 1991. *Postmodern Theory: Critical Investigations*. Guilford Press.
- __199. *The Postmodern Turn*
- __2001. *The Postmodern Adventure*
- Bloom, Howard. 2001. *Global Brain*. Wiley.
- Bourne, Edmund J. 2009. *Global Shift: How A New Worldview Is Transforming Humanity*. New Harbinger Publications.
- Burke, James and Ornstein, Robert. 1997. *The Axemaker's Gift*. Tarcher.
- Castells, Manuel. 1996, 2000. *The Rise of the Network Society: Economy, Society and Culture*. Blackwell Publishers Ltd.
- __1997. *The Rise of the Network Society: The Power of Identity*
- __1998. *The Rise of the Network Society: End of Millennium*
- Bloom, Howard. 2000. *Global Brain: The Evolution of Mass Mind from the Big Bang to the 21st Century*. John Wiley & Sons, Inc.
- Brown, Julian. 2000. *Minds, Machines and the Multiverse: The Quest for the Quantum Computer*. Simon & Schuster.
- Capra, Fritjof. 2004. *The Hidden Connections: Integrating the Biological, Cognitive, and Social Dimensions of Life Into a Science of Sustainability*. Doubleday.
- __1997. *The Web of Life*. Anchor.
- Cilliers, Paul. 1998. *Complexity and Postmodernism*. Routledge.
- Clement, W.R. 1998. *Quantum Jump*. Insomniac Press.
- Cohen, Robin and Rai, Sherin M. ed. 2000. *Global Social Movements*. The Athlone Press.
- Coon, Carl. 2000. *Culture Wars and the Global Village: A Diplomat's Perspective*. Prometheus Books.
- Ellul, Jacques. 1964. *The Technological Society*. Vintage Books.
- Fogel, Robert William. 2000. *The Forth Great Awakening and the Future of Egalitarianism*. University of Chicago Press.
- Fowler, James. 1995. *Stages of Faith: The Psychology of Human Development and the Quest for Meaning*. Harper One.
- Friedman, Thomas L. 2000. *The Lexus and the Olive Tree*. Anchor Books.
- Fukayama, Francis. 1992. *The End of History and the Last Man*. 1992. Avon Books.
- __1999. *The Great Disruption: Human Nature and the Reconstruction of Social Order*. The Free Press.

- ___ 2002. *Our Posthuman Future: Consequences of the Biotechnology Revolution*. Picador.
- Gabli, Suzi. 1997. *Conversations at the End of Time*. Thames and Hudson, Inc.
- Galbraith, John Kenneth. 1985. *The New Industrial State*. Mentor Books.
- Gebser, Jean. 1986. *The Ever-Present Origin*. Ohio University Press.
- Giddens, Anthony. 2000. *The Third Way and Its Critics*. Polity Press.
- Gilligan, Carol. 1982. *In a Different Voice: Psychological Theory and Women's Development*. Harvard University Press.
- de Graaf, John and Wann, David and Naylor, Thomas. 2002. *Affluenza: The All-Consuming Epidemic*. Berrett-Koehler Publishers.
- Lappe, Frances Moore. 1998. *World Hunger: Twelve Myths*. Grove Press.
- Greider, William. 1998. *One World Ready or not: The Manic Logic of Global Capitalism*. Touchstone Books.
- Harrison, Lawrence E. ed. 2000. *Culture Matters: How Values Shape Human Progress*. Basic Books.
- Hawken, Paul and Lovins, Amory. 2000. *Natural Capitalism*. US Green Building Council.
- Hayek, F.A. 1942/1972. *The Road to Serfdom*. University of Chicago Press.
- Hertsgaard, Mark. 2000. *Earth Odyssey: Around the World in Search of Our Environmental Future*. Broadway Books.
- Hertz, Noreena. 2002. *Global Capitalism and the Death of Democracy*. The Free Press.
- Held, David and McGrew, Anthony. ed. 2000. *The Global Transformations Reader: An Introduction to the Globalization Debate*. Polity Press.
- Huntington, Samuel P. 1996. *The Clash of Civilizations?: The Debate*. Council on Foreign Relations, Inc.
- ___ 1998. *The Clash of Civilizations: Remaking World Order*. Touchstone Books.
- Ho, Mae-Wan. 2000. *Genetic Engineering: Dream or Nightmare*. Continuum Publishing Company.
- Homer Dixon, Thomas. 2000. *The Ingenuity Gap: How Can We Solve the Problems of the Future?* Alfred A. Knopf.
- ___ 2008. *The Upside of Down: Catastrophe, Creativity, and the Renewal of Civilization*. Island Press.
- Kanter, Rosabeth Moss. 1995. *World Class*. Simon and Schuster.
- Kaplan, Robert D. 2000. *The Coming Anarchy: Shattering the Dreams of the Post Cold War*. Random House.
- Kegan, Robert. 1982. *The Evolving Self: Problem and Process in Human Development*. Harvard University Press.
- ___ 1994. *In Over Our Heads: The Mental Demands of Modern Life*.
- Kennedy, Paul M. 1993. *Preparing for the Twenty-First Century*. Random House.
- Koestler, Arthur. 1971. *The Ghost in the Machine*. Gateway Editions
- Korten, David C. 2000. *When Corporations Rule the World*. Kumarian Press, Inc. and Berrett-Kochler Publishers, Inc.
- ___ 2001. *The Post Corporate World: Life After Capitalism*
- Klare, Michael T. 2002. *Resource Wars: The New Landscape of Global Conflict*. Henry Holt and Company.
- Kunstler, James Howard. 1998. *Home from Nowhere*. Touchstone Books.
- ___ 1994. *The Geography of Nowhere: The Rise and Decline of America's Man-Made Landscape*. Free Press.

- Lasn, Kalle. 1999. *Culture Jam*. Eagle Brook.
- Lewin, Roger. 1999. *Complexity: Life at the Edge of Chaos*. University of Chicago Press.
- Lomborg, Bjorn. 2001. *The Skeptical Environmentalist*. Cambridge University Press.
- ___ 2008. *Cool It*. Random House.
- Lovejoy, Arthur. 1960. *The Great Chain of Being*. Harper Torchbooks.
- Lovelock, James. 1988. *Ages of Gaia: A Biography of Our Living Earth*. W W Norton & Co Inc.
- Luttwak, Edward. 1999. *Turbo-Capitalism*. HarperCollins.
- Mander, Jerry. ed. 1996. *The Case Against the Global Economy*. Sierra Club Books.
- Meadows, Donella H. and Meadows, Dennis L., editors. 1978. *The Limits to Growth*. Signet.
- Mickelthwait, John & Wooldrige, Adrian. 2000. *Future Perfect*. Crown Business.
- Mittelman, James H. 2000. *The Globalization Syndrome*. Princeton University Press.
- Muller, Herbert J.. 1970. *Children of Frankenstein*. Indiana University Press.
- Mumford, Lewis. 1963. *Technics and Civilization*. Harbringer.
- Neuman, Erich. 1971. *The Origins and History of Consciousness*. Princeton University Press.
- Norberg-Hodge, Helena. 1991. *Ancient Futures: Learning from Ladakh*. Sierra Club Books.
- Ohmae, Kenichi. 1990. *The Borderless World*. Harper Business.
- Ornstein, Robert and Ehrlich, Paul. 2000. *New World New Mind*. Malor Books.
- Palast, Greg. 2003. *The Best Democracy Money Can Buy: The Truth About Corporate Cons, Globalization, and High-Finance Fraudsters*. Plume.
- Pastor, Robert A. ed. 1999. *A Century's Journey: How the Great Powers Shape the World*. Basic Books.
- Rampton, Sheldon and Stauber, John. 2001. *Trust Us We're Experts!: How Industry Manipulates Science and Gambles with Your Future*. Jeremy Tarcher/Putnam.
- Ray, Paul H. and Anderson, Sherry Ruth. 2000. *The Cultural Creatives: How 50 Million People are Changing the World*. Harmony Books.
- Rifkin, Jeremy. 1995. *The End of Work: The Decline of the Global Labor Force and the Dawn of the Post-Market Era*. G. P. Putnam's Sons.
- ___1998. *The Biotech Century: Harnessing the Gene and Remaking the World*. Jeremy P. Tarcher/Putnam.
- Rosencrance, Richard. 1999. *The Rise and Fall of the Virtual State*. Basic Books.
- Rothschild, Michael.1995. *Bionomics: Economy as Ecosystem*. Owl Books.
- Sahtouris, Elisabet. 1989. *Gaia: The Human Journey from Chaos to Cosmos*. Pocket.
- Schaer, Roland, Claeys, Gregory, and Tower Sargent Lyman (editors). 2001. *Utopia: The Search for the Ideal Society in the Western World*, Oxford University Press.
- Schumacher, E.F. 1978. *A Guide for the Perplexed*. Harper Perennial.
- Silver, Lee. 1997. *Remaking Eden: Cloning and Beyond the Brave New World*. Avon Books.
- Shiva, Vandana. 2000. *Stolen Harvest: The Hijacking of the Global Food Supply*. South End Press.
- Skelton, Tracy and Allen, Tim. ed. 1999. *Culture and Global Change*. Routledge.
- Smith, Houston. 2001. *Why Religion Matters*. HarperSanFrancisco.
- Stiglitz, Joseph E. 2002 *Globalization and Its Discontents*. W.W. Norton and Company.
- Soros, George. 2000. *Open Society*. Public Affairs.
- Teilhard de Chardin, Pierre. 1976. *The Phenomenon of Man*. Harper Perennial.
- Tillich, Paul. 1962. *The Courage to Be*. Yale.

- Thompson, William Irwin. 1998 *Coming Into Being: Artifacts and Texts in the Evolution of Consciousness*. Palgrave Macmillan Trade.
- 1971. *The Edge of History*. Harper Colophon Books.
- 1973. *Passages About the Earth*. Perennial Library.
- Waldrop, M. Mitchell. 1993. *Complexity: The Emerging Science at the Edge of Order and Chaos*. Simon & Schuster.
- Wilber, Ken. 1995. *Sex, Ecology, and Spirituality: The Spirit of Evolution*. Shambhala Publications.
- 2000. *A Theory of Everything*. Shambhala Publications.
- 2011. *Integral Psychology: Consciousness, Spirit, Psychology*. Shambhala Publications.
- 2007. *Integral Spirituality: A Startling New Role for Religion in the Modern and Postmodern World*. Shambhala Publications.
- Williams, Oliver F. ed. 2000. *Global Code of Conduct: An Idea Whose Time Has Come*. University of Notre Dame Press.
- Zachary, G. Pascal. 2000. *The Global Me*. Public Affairs.
- Zerzan, John. 2002. *Running on Emptiness: The Pathology of Civilization*. Feral House.

Dedication

Love and gratitude to Andrea Clark for editing the earliest, longest, and most unwieldy version of this book. Friends of that caliber are rare and precious.

Special thanks to my wife, Tsufit, whose boundless faith in me is only exceeded by her endless patience.

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Word of mouth and recommendations are essential in helping an author's work find new readers. If you enjoyed *The Alchemy of World and Soul* please consider writing a short review at Amazon. Even a few words would be very helpful.

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Endnotes

¹ I'm not the first to use the metaphor of the chrysalis to describe the transformations that our world is headed for. Independent scholar L. Robert Keck also uses it extensively in his book, *Sacred Quest*. Keck describes three main stages of the evolution of human consciousness, or in his terms, Soul. The first epoch corresponds to the period from 33,000 B.C. to 8,000 B.C., while the second is from 8,000 B.C. to the present. He then suggests that we are rapidly progressing into a new stage of evolution, a "Chrysalis Stage," of the maturation of the human Soul. While I agree in general with this proposition, as the course of this book will make clear, I also disagree on many of the specifics.

² Carl Jung, "Psychological Aspects of the Mother Archetype," *The Basic Writings of C.G. Jung*, p. 360

³ Roger Walsh, *Essential Spirituality*, p. 4

⁴ Paul Tillich, *The Courage to Be*, p. 186.

⁵ Michael Lerner, *Spirit Matters*, p. 7

⁶ David Held and Anthony McGrew, *The Global Transformations Reader*, p. 55

⁷ See: <http://www.nytimes.com/1996/12/08/opinion/foreign-affairs-big-mac-i.html> and http://en.wikipedia.org/wiki/Golden_Arches_Theory_of_Conflict_Prevention#.22Golden_Arches_Theory_of_Conflict_Prevention.22

⁸ See: http://en.wikipedia.org/wiki/Dell_Theory_of_Conflict_Prevention

⁹ Anthony Giddens, *The Third Way and Its Critics*, p. 164

¹⁰ See: http://en.wikipedia.org/wiki/Epidemiology_of_depression

¹¹ See the editorial: "The Waning Phase Of Globalization Has Begun" by Felipe de la Balze: http://www.worldcrunch.com/world-affairs/the-waning-phase-of-globalization-has-begun/trade-economics-global-rivalries-interest-rates-globalization/c1s17166/#.VDtj0SLD_RY

¹² W. R. Clement, *Quantum Jump*, p. 103

¹³ Robert Ornstein and Paul Ehrlich, *New World New Mind*, p. 117

¹⁴ James Burke and Robert Ornstein, *The Axemaker's Gift*, p. 281

¹⁵ Paul Ray and Sherry Ruth Anderson, *The Cultural Creatives*, p. 80

¹⁶ Paul Ray and Sherry Ruth Anderson, *The Cultural Creatives*, p. 27

¹⁷ Paul Ray and Sherry Ruth Anderson, *The Cultural Creatives*, p. 11

¹⁸ Ken Wilber, *A Theory of Everything: An Integral Vision for Business, Politics, Science and Spirituality*, p.12-13. Note: Wilber is specifically referring to the Yellow stage of consciousness, the first of two stages of Second Tier thinking as described in the Spiral Dynamics model. For the purposes of simplicity, I

am referring here to that stage alone as Integral, although elsewhere in the book it is clear that what I am calling an Integral worldview encompasses two separate stages in the Spiral Dynamics model.

¹⁹ Ken Wilber, *A Theory of Everything: An Integral Vision for Business, Politics, Science and Spirituality*, p.9-11

²⁰ See: <http://www.pbs.org/wgbh/pages/frontline/shows/fertility/etc/cloning.html>

²¹ See: <http://www.epa.gov/climatechange/science/indicators/ghg/global-ghg-emissions.html>

²² E.F. Schumacher, *A Guide for the Perplexed*, p. 56

²³ Arthur Lovejoy, *The Great Chain of Being*, p. 59

²⁴ See: <http://ifg.org/>

²⁵ For more on cultural relativism see: <http://faculty.uca.edu/rnovy/Rachels--Cultural%20Relativism.htm>. For a dysfunctional postmodern defense of female genital mutilation see: <http://commonhealth.wbur.org/2012/11/defense-female-circumcision>

²⁶ Herbert J. Muller, *Children of Frankenstein*, p. 41

²⁷ Edward Goldsmith, from *Turning Away from Technology*, p. 116

²⁸ Jacques Ellul, *The Technological Society*, p. 192

²⁹ For more information see: <http://rprogress.org/index.htm>. Also see: <http://www.socialprogressimperative.org/>

³⁰ Lewis Mumford, *Technics and Civilization*, p. 184-5

³¹ Arthur Koestler, *The Ghost in the Machine*, p. 47

³² Ken Wilber, *Sex, Ecology, Spirituality: The Spirit of Evolution*, p. 127

³³ Ken Wilber, *Sex, Ecology, Spirituality: The Spirit of Evolution*, p. 128

³⁴ Robert Kaplan, *The Coming Anarchy: Shattering the Dreams of the Post Cold War*, p. 182

³⁵ H.G. Wells, *A Modern Utopia* (Lincoln: The University of Nebraska Press, 1905, 1967), p. 318

³⁶ Yevgeny Zamyatin, *We*, p. 89

³⁷ If you want to see the ideas of culture being sprayed at us by Madison Avenue being ripped to shreds with caustic wit, I highly recommend picking up a copy of the magazine *Adbusters*. Although it fails, in my opinion, to offer a solid alternative to the bland consumerist marketing that corporations are pawning off as culture, it does offer a scathing critique of advertising and how it affects our mental landscape.

³⁸ For more information on world poverty see: <http://www.globalissues.org/article/26/poverty-facts-and-stats>

³⁹ Vimala Thakar, *Spirituality and Social Action*, p. 3

⁴⁰ Vimala Thakar, *Spirituality and Social Action*, p. 5

⁴¹ Indian philosopher and sage, Sri Aurobindo also applied evolution to the Great Chain of Being in the earlier part of the 20th century, but specifically in terms of the evolution of human consciousness. See *A Greater Psychology*, by A.S. Dalal.

⁴² Pierre Teilhard de Chardin, *The Phenomenon of Man*, p. 182

⁴³ In referring to the theosphere, I am talking strictly about the layer of minds that are aware of the Divine, not the Divine as such. Spirit, the Ground of All Being, the Ultimate Nature of Reality, cannot be dwarfed by anything, since it is the ground of everything.

⁴⁴ For an example of a well-regarded eco-optimist see the work of Danish political scientist Bjørn Lomborg (<http://www.lomborg.com/>) particularly his books *The Skeptical Environmentalist* (Cambridge University Press, 2001) and *Cool it - The Skeptical Environmentalist's Guide to Global Warming* (Random House, 2007 and 2010). For an example of a respected environmentalist, see Letser Brown's work with The World Watch Institute (<http://www.worldwatch.org/>) especially their yearly report, *The State of the World 2015* (Island Press, 2015) being the most recent. Also see the work of Bill McKibben, particularly *Hope, Human and Wild: True Stories of Living Lightly on the Earth* (Milkweed Editions, 2007) and his environmental advocacy organization 350.org (<http://350.org/>)

⁴⁵ David Korten, *When Corporations Rule the World*, p. 76

⁴⁶ See Paul Hawken and Amory Lovins' *Natural Capitalism*.

⁴⁷ Edward O. Wilson, "The Bottleneck," *American Scientific*, p. 84. While Wilson uses the figure of four Earths, I have also read three and three and a half in other sources. This discrepancy can probably be attributed to which criteria are being used to create the analogy. Regardless, it still more than the one planet we have at our disposal.

⁴⁸ For information on the state of the world's water supply, see the invaluable information provided by the Pacific Institute at <http://pacinst.org/>.

⁴⁹ Bjorn Lomborg, *The Skeptical Environmentalist*, p. 164

⁵⁰ For the current report see: <http://www.ipcc.ch/>

⁵¹ See Sheldon Rampton and John Stauber's *Trust Us We're the Experts*, chapter 10, "Global Warming is Good for You."

⁵² For a brief and easily digestible introduction to the issues of global warming and climate change see Lee R. Kump and Michael E. Mann's *Dire Predictions: Understanding Global Warming* (Pearson Education, 2009). For regular updates in the facts of global warming see the Environmental Protection Agency's web site at <http://www.epa.gov/climatechange/index.html> as well the regular reports from the International Panel on Climate Change at <http://www.ipcc.ch/>. For information by actual climate scientists on developing issues, controversies, and rebuttals to climate change deniers see: <http://www.realclimate.org/> and <http://www.skepticalscience.com/>.

⁵³ Sheldon Rampton and John Stauber, *Trust Us, We're Experts!*, p. 124

⁵⁴ See: <http://www.eia.gov/tools/faqs/faq.cfm?id=427&t=3>

⁵⁵ Francis Bacon, *Novum Organum*. Quoted from *The Philosophers of Science*. Edited by Saxe Commins and Robert N. Linscott (New York: Random House, 1947), p. 129

⁵⁶ Rene Descartes, *The Treatise on Man*. Quoted from, *Descartes Selections*. Edited by Ralph M. Eaton. (New York: Charles Scriber's Sons), p. 350

⁵⁷ See Fritjof Capra's *The Hidden Connections: Integrating the Biological, Cognitive, and Social Dimensions of Life Into a Science of Sustainability* (Doubleday, 2004) for an outline of potentially holistic scientific paradigm.

⁵⁸ Swami Prabhavanda and Fredrick Manchester, ed. trans., *The Upanishads: Breath of the Eternal*, p. 70.

⁵⁹ See James Lovelock, *Ages of Gaia: A Biography of Our Living Earth*.

⁶⁰ For a good introductory guide to ecology see John Cloudsley-Thompson, *Ecology* (NTC/Contemporary Publishing Company, 1999)

⁶¹ For information on species loss see:

http://wwf.panda.org/about_our_earth/biodiversity/biodiversity/. For information on

deforestation see: <http://environment.nationalgeographic.com/environment/global-warming/deforestation-overview/>. For information on world fishing stocks see:

http://wwf.panda.org/about_our_earth/blue_planet/problems/problems_fishing/. For

information on pollution facts see: <http://www.conserve-energy-future.com/various-pollution-facts.php>.

⁶² Elisabet Sahtouris, *Gaia: The Human Journey from Chaos to Cosmos*, p. 62

⁶³ For more current information on the state of world poverty see:

<http://www.globalissues.org/article/26/poverty-facts-and-stats>

⁶⁴ These figures on wealth and inequality change on a yearly basis, always in the direction of greater concentration of wealth in the hands of fewer and fewer people. See:

<http://www.globalissues.org/article/26/poverty-facts-and-stats> and

<http://www.latimes.com/business/money/la-fi-mo-oxfam-world-economic-forum-income-inequality-20140120,0,7080817.story#axzz2wujNgIWi> and <http://www.globalpost.com/special-reports/global-income-inequality-great-divide-globalpost>

⁶⁵ See: <http://www.un.org/apps/news/story.asp?NewsID=45165#.VBXvKPmwJjs>

⁶⁶ Nicholas Eberstadt, "World Population Prospects for the Twenty-First Century," *Earth Report 2000*, p. 78

⁶⁷ Donella H. Meadows/Dennis L Meadows, editors, *The Limits to Growth*, p. 194

⁶⁸ John de Graaf, David Wann, and Thomas H Naylor, *Affluenza: The All-Consuming Epidemic*. p. 61

⁶⁹ Kalle Lasn, *Culture Jam*, p. 19

⁷⁰ Theodor Adorno, *The Adorno Reader*, p. 236

⁷¹ See Lawrence E. Harrison and Samuel P. Huntington's *Culture Matters* (Basic Books, 2001) for an introductory overview of the idea of a clash of cultures in the coming century. Although the idea of cultures at odds with one another is instructive, I believe it is more helpful to look at how the dominant worldviews of different culture conflict. For instance, two cultures with a predominantly Postmodern worldview will be less likely to engage in armed conflict than two cultures with predominantly Traditional worldviews.

⁷² Mark Hertsgaard, *Earth Odyssey*, p. 273

⁷³ Michael Rothschild, *Bionomics: Economy as Ecosystem*, p. 334

⁷⁴ For a fun and easy introduction to economic ideas see: *The Economics Book (Big Ideas Simply Explained)* DK Publishing, 2014.

⁷⁵ W. Brian Arthur, et. al., *The Economy as an Evolving Complex System*, p. 4

⁷⁶ David C. Korten, *A Post-Corporate World*, p. 40

⁷⁷ David C, Korten, *The Post Corporate World*, p. 41

⁷⁸ Benjamin Barber, *Jihad vs. McWorld*, p. 98

⁷⁹ Rosabeth Moss Kanter, *World Class*, p. 147

⁸⁰ Manuel Castells, *End of Millennium*, p. 344

⁸¹ Richard Rosecrance, *The Rise and Fall of the Virtual State*, p. 68

⁸² Richard Rosecrance, *The Rise and Fall of the Virtual State*, p. 91

⁸³ Paul Hawken, Amory Lovins & L. Hunter Lovins, *Natural Capitalism*, p. 287

⁸⁴ James Kunstler, *Home From Nowhere*, p. 37

⁸⁵ For more information about the state of farmland in the United States see:
<http://www.farmland.org/resources/fote/>

⁸⁶ It is difficult to fully describe Soleri's ideas of arcologies, not the least of all because he has been highly influenced by Jesuit scientist and philosopher, Teilhard de Chardin. Soleri's writing is deep, tangled, and mercurial, but like his Jesuit inspiration, well worth the effort. See his books *Arcology: The City in the Image of Man* (Cosanti Press, 2006), *Arvosanti: An Urban Laboratory?* (Vti Press, 1987), and *The Omega Seed* (Doubleday Books, 1981). For a good introduction to Paolo Soleri's ideas see Antonietta Iolanda Lima's *Soleri: Architecture as Human Ecology* (The Monacelli Press, 2003).

⁸⁷ Paolo Soleri, *Arcology: The City in the Image of Man*, Part I, Chapter 6

⁸⁸ James Howard Kunstler, *The Geography of Nowhere*, p. 216

⁸⁹ For an excellent introduction to Integral theory as applied to urban living and how we might chart a sustainable future for our cities, see Marilyn Hamilton's *Integral City: Evolutionary Intelligences for the Human Hive* (New Society Publishers, 2008) and her website <http://www.integralcity.com/>

⁹⁰ For more information on Gaviotas, see Alan Weisman's *Gaviotas: A Village to Reinvent the World* (Chelsea Green Publishing, 2009)

⁹¹ Jeremy Rifkin, *The Biotech Century*, p. 36

⁹² See: http://www.washingtonpost.com/world/europe/at-trade-talks-us-eu-ready-for-fight-on-genetically-modified-crops/2013/05/17/8e61176a-bdb0-11e2-9b09-1638acc3942e_story.html

⁹³ See: <http://asn-cdn-remembers.s3.amazonaws.com/1247eb83af3c2c77fb8cf75d5e158f1f.pdf>

⁹⁴ See: http://www.aaas.org/sites/default/files/AAAS_GM_statement.pdf

⁹⁵ For a simple overview of the science supporting GMOs see these two web sites: <http://gmopundit.blogspot.com/p/450-published-safety-assessments.html> and <http://rameznaam.com/2013/04/28/the-evidence-on-gmo-safety/>

⁹⁶ For an overview of some of these studies, see: <http://www.globalresearch.ca/ten-scientific-studies-proving-gmos-can-be-harmful-to-human-health/5377054> and <http://www.motherjones.com/tom-phillpott/2013/02/do-gmo-crops-have-lower-yields> and for a concise argument against GMOs see Mae-Wan Ho's *GMO Free: Exposing the Hazards of Biotechnology to Ensure the Integrity of Our Food Supply* (Square One Publishers, 2014)

⁹⁷ See: Lee Silver *Remaking Eden: Cloning and Beyond the Brave New World*, Weidnefeld & Nicolson, 1998

⁹⁸ See: Ray Kurzweil, *The Singularity Is Near: When Humans Transcend Biology*, (Penguin Books, 2006)

⁹⁹ See: <http://arstechnica.com/science/2011/02/adding-up-the-worlds-storage-and-computation-capacities/>

¹⁰⁰ See: <http://arstechnica.com/information-technology/2014/02/google-teams-with-foxconn-to-build-robots-that-replace-human-workers/>. For a glimpse at what the future of self-learning robotics may look like see: http://www.nytimes.com/2013/03/31/business/robots-and-humans-learning-to-work-together.html?_r=0

¹⁰¹ Lawrence Lessig, *Code*, p. 143

¹⁰² K. Eric Drexler, *Engines of Creation*, p. 201

¹⁰³ Roger Walsh and Frances Vaughan, *Paths Beyond Ego*, p. 3

¹⁰⁴ See: Sharon Begley, "Religion and the Brain," *Newsweek*, May 14, 2001 and http://www.naturalnews.com/023055_brain_God_the.html#

¹⁰⁵ Aldous Huxley, *The Perennial Philosophy*, p. vii.

¹⁰⁶ Ken Wilber, *The Marriage of Sense and Soul*, p. 161

¹⁰⁷ For a more detailed examination of the critiques of the perennial philosophy, Wilber's spectrum of consciousness, and transpersonal theory in general, see John Heron's *Sacred Science*, Jorge N. Ferrer's *Revisioning Transpersonal Theory*, and Steven Katz's *Mysticism and Philosophical Analysis*, and the website largely devoted to critiquing Ken Wilber's theories, <http://www.integralworld.net/>

¹⁰⁸ See: <http://www.preposterousuniverse.com/blog/2009/06/23/science-and-religion-are-not-compatible/>

¹⁰⁹ As a side note, see physicist David Bohm's work on what he refers to as the Implicate and Explicate Orders of reality:

http://en.wikipedia.org/wiki/Implicate_and_explicate_order_according_to_David_Bohm

¹¹⁰ Ken Wilber, *Integral Psychology*, from *Collected Works*, Vol. 4, p. 541

¹¹¹ J. Krishnamurti, *Awakening of Intelligence*, p. 302

¹¹² Roger Walsh and Frances Vaughn, *Paths Beyond Ego*, p. 53

¹¹³ Daniel Goleman, *The Varieties of Meditative Experience*, p. xix

¹¹⁴ Evan Harris Walker, *The Physics of Consciousness*, p. 151

¹¹⁵ I am referring here to the works of Jean Piaget, Lawrence Kohlberg, Jane Loevinger, Carol Gilligan, Robert Kegan, Ken Wilber, James Fowler, and Jenny Wade among others. For now, it is sufficient to note that the general notion of stages of personal development, as well as sociocultural development, is supported by a large body of research and has been verified cross-culturally around the world.

¹¹⁶ Robert Kegan, *In Over Our Heads*, p. 5

¹¹⁷ Some researchers, such as Stan Grof, conclude that the developmental stages should include the prenatal. His research suggests that the prenatal infant experiences the womb in a much different manner than it later experiences the post-birth world. See his books: *Beyond the Brain* and *The Holotropic Mind*.

¹¹⁸ For a good overview of the subject see:

<http://blogs.discovermagazine.com/intersection/2011/09/07/your-brain-on-politics-the-cognitive-neuroscience-of-liberals-and-conservatives/#.VBTxjfmwJjs>

¹¹⁹ Pitirim A. Sorokin, *The Crisis of Our Age: The Social and Cultural Outlook*, p. 304

¹²⁰ Glenn Ward, *Postmodernism*, p. 30

¹²¹ Glenn Ward, *Postmodernism*, p. 31

¹²² It should be noted that from a nondual perspective of the ultimate nature of reality, as found in Buddhism's *Emptiness* and Advaita's *One Without a Second*, that while there is a difference between Goya's painting and Duchamp's urinal in a gross sense, in an ultimate sense they are One, because everything is One, everything is Spirit, equally and fully. However, it is also important to note that a fully integrated, nondual perspective would still be able to view the world, and its art, in a gross sense, and thus be able to acknowledge the contexts that exist within it.

¹²³ Huston Smith, "Postmodernism and the World's Religions," *The Truth About Truth*, ed. by Walter Truett Anderson, p. 209

¹²⁴ Ken Wilber, *The Eye of Spirit*, p. 130-131

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- ¹²⁵ Ken Wilber, *The Eye of Spirit*, p. 131
- ¹²⁶ Erich Neumann, *The Origins and History of Consciousness*, p. xx.
- ¹²⁷ Jean Gebser, *The Ever-Present Origin*, p. 42
- ¹²⁸ Since publication of their book, *Spiral Dynamics: Mastering Values, Leadership, and Change*, Beck and Cowan have parted ways in their interpretation of Spiral Dynamics. Cowan's work can be found at: <https://spiraldynamics.org/> while Beck's work can be found at: <http://www.spiraldynamics.net/>
- ¹²⁹ Don Edward Beck and Christopher C. Cowan, *Spiral Dynamics: Mastering Values, Leadership, and Change*, p. 41
- ¹³⁰ I also recommend Ken Wilber's *Integral Psychology*. It contains a large number of charts that cross-index nearly every psychological and sociological systems of development.
- ¹³¹ Ken Wilber, *Sex, Ecology, Spirituality*, p. 215
- ¹³² For more information on streams and waves of development, see: Ken Wilber's *Integral Psychology* (Shambhala Publications, 2011). Also, see his *Integral Spirituality: A Startling New Role for Religion in the Modern and Postmodern World* (Shambhala Publications, 2011), particularly for his explanation of the Wilber-Combs Matrix, which is a concordance chart that matches standard stages of development with stages of spiritual development and gives a more full explanation of peak spiritual experiences.
- ¹³³ Ken Wilber, *A Brief History of Everything*, p. 202
- ¹³⁴ Ken Wilber, *A Brief History of Everything*, p. 202
- ¹³⁵ Ken Wilber, *A Brief History of Everything*, p. 202
- ¹³⁶ Ralph Waldo Emerson, *The Complete Essays*, "The Over-Soul". p. 262
- ¹³⁷ Ken Wilber, *A Brief History of Everything*, p. 211
- ¹³⁸ Ken Wilber, *A Brief History of Everything*, p. 211
- ¹³⁹ Ken Wilber, *A Brief History of Everything*, p. 220
- ¹⁴⁰ Ken Wilber, *A Brief History of Everything*, p. 220
- ¹⁴¹ Ken Wilber, *A Brief History of Everything*, p. 227
- ¹⁴² Ken Wilber, *A Brief History of Everything*, p. 227
- ¹⁴³ Ken Wilber, *A Brief History of Everything*, p. 228
- ¹⁴⁴ Aristotle, *The Nicomachean Ethics* from, *Introduction to Aristotle*, Ed. Richard McKeon. (New York; Random House Modern Library, 1947), p. 340
- ¹⁴⁵ Alasdair MacIntyre, *After Virtue*, p. 8
- ¹⁴⁶ Thomas Sowell, *The Quest for Cosmic Justice*, p. 159
- ¹⁴⁷ John Rawls, *A Theory of Justice*, p. 60

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- ¹⁴⁸ John Rawls, *A Theory of Justice*, p. 62
- ¹⁴⁹ St. Thomas Aquinas, *Summa Theologica*, q. xlvi
- ¹⁵⁰ Swami Prabhavananda and Christopher Isherwood, *Shankara's Crest Jewel of Discrimination: Timeless Teachings on Nonduality*, p. 22
- ¹⁵¹ Quoted from *World Scripture*, p. 102
- ¹⁵² Jurgen Habermas, *Communication and the Evolution of Society*, p. 91
- ¹⁵³ Lawrence Thomas, "Morality and Psychological Development," *A Companion to Ethics*, p. 466
- ¹⁵⁴ Carol Gilligan, *In a Different Voice: Psychological Theory and Women's Development*, p. 22
- ¹⁵⁵ Lawrence Kohlberg; Charles Levine and Alexandra Hewer, *Moral Stages: A Current Formulation and A Response to Critics*, p. 73
- ¹⁵⁶ Thomas, p. 465-466
- ¹⁵⁷ Paul Cilliers, *Complexity and Postmodernism*, p.ix
- ¹⁵⁸ Fritjof Capra, *The Web of Life*, p. 29-30
- ¹⁵⁹ M. Mitchell Waldrop, *Complexity*, p. 145
- ¹⁶⁰ M. Mitchell Waldrop, *Complexity*, p. 86
- ¹⁶¹ M. Mitchell Waldrop, *Complexity*, p. 146-147
- ¹⁶² Howard Bloom, *Global Brain*, p. 43-44
- ¹⁶³ Albert-Laszlo Barabasi, *Linked: The New Science of Networks*, p. 225-226