

A Legacy for My Grandchildren



by Sam Mackintosh

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Preface: For Older Readers

I turned 81 years old on All Saints Day, 2018, so this is a nearing-end-of-life project. It's a small pamphlet-- or long essay-- addressed to my grandchildren. I think they will be able to understand it around the time they reach their junior year in high school.

Anne and I have two adult children. Our daughter Rosemary and her husband John have two boys; our son Michael and his wife Christine have two girls. We live in Cherry Hill, New Jersey, close to Philadelphia, and hope to celebrate our 50th wedding anniversary in June, 2020.

I have Master's degrees in Science (from Wesleyan University) and in Religion (from New York Theological Seminary), and I taught young adults in high school and college for more than 40 years.

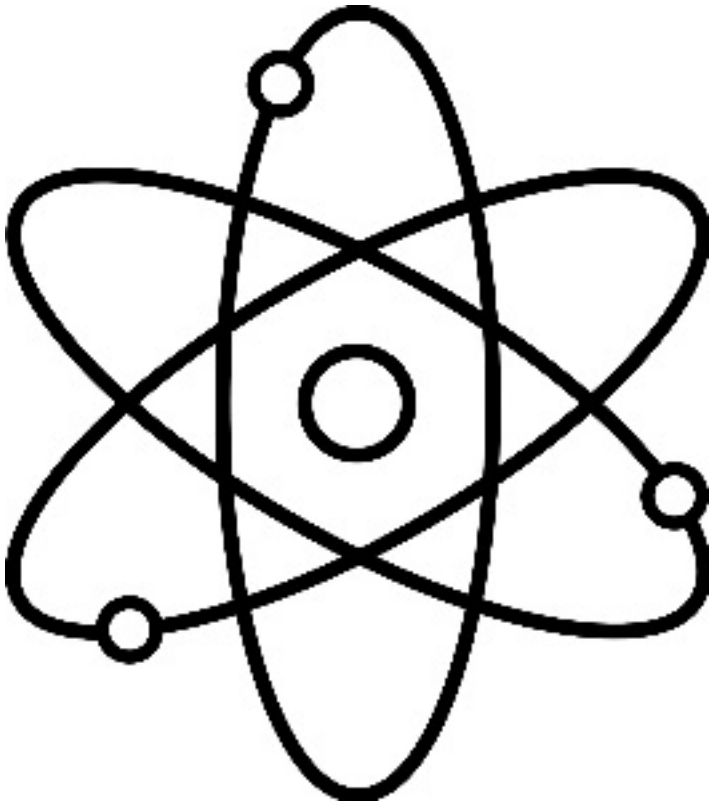
I have been interested in science and religion all my life, especially the evolutionary perspectives of contemporary science and the common elements found in many age-old religious rituals throughout the world.

Here I'm essentially attempting to describe how I see the findings of modern Western science and the ancient roots of Western religion as coming together. It's not an academic paper, but a description of an integrated view of science and religion that I have worked out over my lifetime. And expressed, I hope, in words which older adolescents and young adults-- the age group I'm most comfortable with-- will find readily understandable. For their sake I have included no footnotes or additional references! But there's a long bibliography-- for older readers!

I've given many talks and written many essays in my lifetime, mostly about various aspects of science and religion. But I never had the opportunity to write something long enough to include the whole sequence of my perspectives in one text. This quasi-autobiographic Legacy is it.

- Sam Mackintosh
"Grumps" to Owen and Luke, Bitsy and Paige

Part I: *Kosmos*



Chapter 1. Introduction

Hello, Owen and Luke, Bitsy and Paige!

I'm writing this for you to read when you are young adults.

From my years of teaching high school and college kids, I know that by the time you are high school juniors your minds will be mature enough to follow the ideas I'm sharing with you here.

This "Legacy"-- which seems to be as good a name as any I've been able to come up with for it (my original working title was "Legacy")-- has three major parts. I don't have adequate names in English for those parts, because American society and Western culture do not yet have the kinds of words needed to express well many of the ideas I want to share with you.

Over the years, I've learned that it often helps to use Greek words in this kind of situation, and that's what I'm doing here. The Greek words are *kosmos*, *anthropos* and *theos*.

Kosmos means "everything," and *anthropos* means "humans." Those are fairly obvious.

But *theos*? In Latin, it's *zeus*, and is usually translated from both languages as "god" or "God." In our society many, maybe even most people, take the meaning of "God" for granted. For others it has no meaning at all, and for still others it has a negative meaning. So whenever possible, I try not to use the word "God." In a pinch I usually use a phrase like "the mystery behind the universe."

Those Greek words are helpful precisely because they're a bit vague. In English, one version of *kosmos*, *anthropos* and *theos* would be "science, humanity and religion." But right from the start, even those words bring up some problems.

"Science" is clear enough; "religion" isn't. And as it turns out, the word "humanity" is as much a problem as the other two. So far, the best word I know for "humans" is "Earthlings," but that's not likely to come into common usage anytime soon.

The real issue here is that we don't yet have a good understanding of *ourselves*-- specifically in terms of our connections with the universe of time, space, matter and energy on one side, and with the mystery behind the

universe on the other.

I have been interested in these three big areas of understanding all my life, and it is precisely an *integrated* view of *kosmos*, *anthropos* and *theos* that I want to share with you in this Legacy.

We do have fields of academic study that deal with limited aspects of our human nature. Anthropology, for example, includes the study of languages, cultures, and ancient civilizations. And Psychology deals with our inner and to a great extent unconscious motivations and drives.

While they are of tremendous value, both fields leave out many things we also need to take into account if we are to have an *integrated* understanding of ourselves. I'm thinking especially of research areas in science such as genetics and ecology, the new neurological studies of our brain and nervous system, and work in artificial intelligence.

We also need to include areas like economics and the history of science. And of course it wouldn't be anything like a fully integrated account of ourselves if we left out our creative efforts: music, literature, the arts, philosophy, all that's included in the "humanities."

So we need a term that refers to *everything* we consider significant about ourselves, one which includes all that we can understand about human persons precisely as conscious and self-aware beings living on planet Earth. (If you have suggestions, and I'm still around when you're reading this, I'd love to hear them!)

As strange as it seems, the phrase "everything significant about us" is apparently what the word "religion" originally use to mean. The old Latin word *religio* is thought to come from the time of Neolithic agriculture, where it referred to the strips of plant material used at harvest time to bind together sheaves of grain.

So "religion" originally may have been used to mean something like "our shared views about 'what holds everything together.'" It referred to *all* that's significant about us simply because we are human.

Even if it doesn't go back to Neolithic times, I think "what holds everything together" may still be a good working definition of "religion."

I want to emphasize at the start, however, that this Legacy is not primarily

about religion. Rather, it's about how I see the findings of modern Western science *and* the roots of humanity's ancient religious traditions coming together. It's the big picture-- a coherent, unified, overview-- that I want to share with you.

And, as I see it, what holds the roots of religion and the findings of science together is nothing less than *ourselves*.

You have probably been asked to read in a high school English class Thornton Wilder's famous play, *Our Town*. In that play, the townspeople sing an old hymn, *Blessed Be the Tie That Binds*.

I think *we humans* (*anthropos*) are "the tie that binds." It's our relationship with the physical universe (*kosmos*) on one hand, and our relationship with the mystery behind the universe (*theos*) on the other, that constitute the unified worldview I hope to describe for you in these pages.

This is still an unconventional perspective. But I like to think that what I'm sharing with you here is how all humanity will eventually come to see itself. It's a vision of how we Earthlings can understand ourselves-- in the broadest and deepest context.

We're obviously not there yet, but global humanity does seem to be moving in that direction.

Three Key Words

There are three key words I will frequently need to use to emphasize the unity of *kosmos*, *anthropos* and *theos*. Since they are probably not familiar, I want to offer preliminary definitions right away. These key words are "cosmology," "dualism" and "patriarchy."

"Cosmology" is a philosophical term for our understanding of how we humans fit in with the rest of the physical cosmos.

In a way, I think "cosmology" might be a one-word summary of all my life's personal interests. Even when I was seven years old I can remember wondering, "What is our place in the universe?"

The problem is that for very many centuries the Western world's cosmology said that we *didn't* have a place. That we don't "fit in."

That perspective-- that we do not belong here-- is called "dualism." It claims that we are aliens on the Earth, prisoners somehow trapped in bodies. It stresses that our true home is elsewhere.

As a worldview, dualism sees humanity as *separate* from both the physical universe (*kosmos*) on one hand, and *separate* from the ultimate source of everything (*theos*) on the other.

It's important to see that this dualistic view is based on a *static* cosmology. It claims, as one of the more pessimistic books in the Bible (the Book of Ecclesiastes) says, that "there is nothing new under the sun." There is, of course. Even the sun itself was new once!

"Change" is everywhere. And "growth" seems to be the very essence of the cosmic process. But static dualism doesn't take seriously either cosmic or biological evolution. It also pays little attention to the psychological development of individual persons, and even less to the cultural development of human societies.

Dualism is an ignorant perspective in the most fundamental sense. So it's important for us to recognize that this static-dualistic worldview-- that nothing really new ever appears in our world-- has been a main component of Western patriarchal culture for many centuries.

"Patriarchy" isn't a philosophical term. It's political. It refers to that stage in humanity's social and cultural development which came after the long era of the hunter-gatherer culture and after the more recent invention of agriculture. We call the present patriarchal period "civilization"-- but that's with great prejudice to those earlier stages of humanity's evolutionary development.

You may find it surprising that the Paleolithic hunter-gatherer period lasted for most of the time human beings have been on Earth: 98% of all human history. (We need to *think big* here!)

The much shorter Neolithic era lasted about 5,000 years. During that agricultural time, Earth Mother and goddess religions were dominant. Patriarchal civilization came after the time of the Great Mother, and it too has lasted about 5,000 years (so far).

The essence of patriarchal society is class distinctions. Some people are considered better than others for what are essentially anatomical reasons. And those who are "better" claim to have authority over the rest of us. Patriarchy is sometimes described as a "pyramid of power" because the *authoritarian control of others*-- from the top down-- is what the patriarchal perspective is all about.

Patriarchy's static cosmology and dualistic religious views persist today because they are still being used, as they have been for many centuries, to reinforce the authority of those at the top of the pyramid.

While global humanity is gradually moving out of this difficult stage of its development, the transition is slow.

For a *contemporary* cosmology we need a positive understanding of the universe as *dynamic* (rather than static), and a non-dualistic understanding of ourselves as *participants* (rather than aliens) in the cosmic evolutionary process.

I mentioned above that as a child I wondered about our place in the universe. I have learned something in the last seventy-plus years, and my basic understanding of our place in the universe is now fairly easy to state. It is what today is usually called the "new cosmology" or "big history." It is the "*new* universe story."

When taken together with the recovered non-dualistic understanding of the world which is at the roots of the Western religious traditions, the dynamic, evolutionary perspectives of modern science constitute a new and greatly needed life-giving cosmology for our contemporary world.

Owen, Luke, Bitsy and Paige, it's the details of these perspectives which are the legacy I hope to share with you in these pages.

Preview of the Chapters

Here's a quick preview of the seven chapters which follow this introduction. I had a bit less trouble finding good names for most of these chapters than I had for the three big parts for which I used Greek names.

In Chapter 2 on Evolution, I describe the basic perspectives of modern evolutionary science from the Big Bang to today. This was the easiest of the chapters for me to write. I've been giving talks on these topics since my senior year in college (that was 1958-59), and I created courses on Evolution for high school students back in the late 1960s.

This Introductory chapter and Chapter 2 on Evolution constitute Part I, the *Kosmos* section of what I want to share with you.

The next four chapters make up Part II. Here the focus is on *Anthropos*. It's the "human" section of my Legacy. In keeping with what I said about the need for a much better understanding of ourselves, this *Anthropos* section contains twice as many chapters as the *Kosmos* or the *Theos* sections.

In Chapter 3 on Our Four-fold Minds, I describe the age-old *quaternary* ("four-part") understanding of our uniquely human form of conscious awareness. I call it "mandalic" because, while it's not yet part of main-stream American culture, expressions of it can be found in the famous sacred circles ("mandalas") of pre-historic Europe, ancient India and native America.

In modern times, this four-fold view of human consciousness was described quite explicitly more than a century ago in the pioneering work of the Swiss psychologist C. G. Jung. I find Jung's vocabulary especially helpful when joined with the animal imagery of the mandala known as the Native American "Medicine Wheel."

Describing them both together is a challenge, but it's one I find especially rewarding and satisfying. The native peoples of Africa, Asia and Australia, as well as the "first peoples" of America, seem to have a much more thorough understanding of how our minds work than do the people of contemporary Western culture. For example, as the famous Lakota teacher Black Elk said, "I can see more than I can describe, and I can understand more than I can see." It's that *deep understanding* of how our conscious minds work that I want to share with you in this Chapter 3 on Our Four-fold Minds.

In Chapter 4 on The Missing Fourth, I describe that specific function of our four-fold minds which has been missing from the static and dualistic perspectives of patriarchal society for many centuries. Its continued absence makes our contemporary cultural perspectives greatly lopsided with regard to our self-understanding and our awareness of our place in the universe. It also accounts for continued widespread indifference to basic social issues such as poverty, human rights and environmental issues such as climate warming.

We don't yet have a good name for this "missing fourth" function of our minds. But, as I hope you will see, attention to it gives us a much better understanding of our own personal significance. The recovery of this fourth function seems to me to be the basic key we need for moving out of the dualistic and static views of our patriarchal past.

Chapter 5 on Ritual and Chapter 6 on Spirituality are about two especially important aspects of ourselves which only make sense in terms of that “missing fourth” function of our minds.

In the old static and dualistic perspective, *ritual and spirituality* were usually considered “religious” topics, which means they had little to do with everyday life. This is still true in our culture today.

But now, in the evolutionary perspectives of big history and the new cosmology, we can understand both ritual and spirituality more correctly. They are *practical* aspects of our lives. Their focus is our personal participation in the dynamic energy processes which empower the evolution of the whole universe. *Ritual* is how we connect with those cosmic energy processes and *Spirituality* is how we make use of them.

The important point here is that all four chapters of Part II *Anthropos* deal with essential aspects of *ourselves*. These four chapters are about how we humans participate in and contribute to the dynamic evolutionary development of the entire *Kosmos*.

The remaining two chapters constitute the *Theos* section of this Legacy. I’ve given them quite unfamiliar Greek names, *Eschaton* and *Ekklesia*-- which I won’t even try to define here. The fact that I have had to use Greek names again is an indication of how difficult it is, in our still static and dualistic patriarchal culture, to find clear and readily understandable words to talk about the ideas I want to share with you in two final chapters that make up Part III of this Legacy.

While Part III on *Theos* is the more explicitly “religious” section of this Legacy, it’s important for you to keep in mind that I don’t mean “religion” in the conventional sense of following rules and beliefs imposed by the authorities of religious institutions. I mean ‘*re-ligio*’ in that basic sense: “what ties everything together.”

Chapter 7 on *Eschaton* has to do with the direction in which the cosmic process is moving. Of course in the still-static worldview of patriarchy the idea that the world might be going anywhere makes no sense at all. So even though this may be a new perspective for you, I think you will find that on a deep level it makes very good sense.

The final Chapter 8 on *Ekklesia* is about what I've called the "community" or "company" of all those persons who throughout the many years of human history have shared in the dynamic understanding of the world. As I see it, these creative persons constitute the evolutionary growing-edge of humanity.

My plan is to explain each of the big ideas in the following chapters one by one, in straightforward and down-to-earth words. My hope is that they all will eventually make good sense to you.

None of these perspectives are the kinds of things people talk about casually in our trivia-focused and celebrity-obsessed culture. We seem to be afraid of serious topics.

But deep down, when we let ourselves think about it, we are aware that our existence isn't absurd. Our lives are full of wonder. We find ourselves *astonished* that we exist, and even astonished that we are *aware* of our astonishment!

So Happy Reading, *Owen, Luke, Bitsy and Paige*! May your lives be filled with wonder!



Chapter 2. Evolution

Hello, Owen and Luke, Bitsy and Paige!

This chapter is a brief overview of what we humans know, thanks to contemporary science, about how the universe works.

It's probably the easiest chapter for me to write. I gave my first talk about cosmic evolution while I was still in college; it was about the formation of the chemical elements in the hearts of stars. And I've been sharing ideas about evolution with anyone who was willing to listen, ever since. As I mentioned in the first chapter, I created and taught courses called "modern evolutionary science" for high school kids starting in the late 1960s.

My main concern in this chapter is simply to emphasize for you the *dynamic* nature of universe. The evolutionary perspective is radically different from the old static worldview. And understanding *that* fact makes all the difference in how we understand *ourselves*.

Since Greek times, the most fundamental aspect of reality was thought to be "being." (That's "*ens*" in Latin, "*on*" in Greek.)

It's important to note that as used here, "being" is a noun, not a verb. "Being" doesn't mean "existing" but, rather, "existence": what every existing thing-- from an amoeba to a galaxy-- has in common. (You may have to think about that idea for a moment to give your brain some space to make the connections. If you do, I promise that it will click.)

Even the mystery behind the universe was said to be "*ens*." The creative source of everything was described as "*ens a se*," which means "being from itself" or "that which has no source other than itself."

That's the end of your philosophy lesson for today.

Well, not really.

The main idea I want to share with you in these deep thoughts is that in our day-- and indeed for the last several centuries-- we Earthlings have been gradually coming to recognize that there is something even more fundamental to reality than static "being." It is *dynamic* change, the progressive *transformation* of things.

We need only to look at the world to see its dynamic nature. Nothing ever stays the same. “Everything changes,” as a basic Buddhist teaching says. And science offers us many well-known examples.

We know from Astronomy, for example, that soon after the Big Bang, atoms began to form into galaxies, stars and planets, and that eventually life emerged on at least one planet. Since there are probably millions of planets, it seems likely that life has emerged on at least some of them besides our own.

We also know from Biology that over millions of years the primitive living things of the Earth slowly evolved into more complex organisms: amoebas, sponges, mollusks, insects, fish, dinosaurs, birds, mammals, humans.

From Paleontology we know that once there were no humans on the Earth. And we know from Anthropology that even after humans arrived, the evolutionary process at the human level didn’t stop.

Our earliest human ancestors were probably scavengers. They lived off the remains of what other creatures had killed. We eventually became nomadic hunter-gatherers, and that hunter-gatherer stage of human culture persisted for almost all of human history: ninety-eight percent.

Farming was invented (or “discovered,” make your choice there) only towards the end of that long hunter-gatherer period. As people settled down, little villages and towns began to appear. Eventually, the great cities arose which we know today.

Along the way, writing and printing, math and science, logic and computers were invented. I can remember when there was no TV, no computers, no Internet, no iPhones, none of the wonderful things “intelligence technology” now offers us.

I’m sure you can remember things like that too, from your younger days. Or even from just a few years ago. “Everything changes!”

There is nothing especially difficult to understand about this dynamic view of life, mind and culture. But our American math and science education programs have been grossly deficient in making these basic evolutionary perspectives available to all students.

A recent Sociology study found that more Americans believe in the lost continent of Atlantis and in UFOs than in evolution. And that more people believe in Bigfoot than in the Big Bang.

I hope things will have changed for the better by the time you get to read this!

One major consequence of the fact that the dynamic evolutionary perspective has yet to become a part of the contemporary educated person's view of the world is that American society especially lacks an awareness of the *development of culture*.

That means we're missing something very important about *ourselves*! "Culture" is what we learn from others: how to speak a specific language, how to use a fork, how to drive a car. It also and especially includes the attitudes and values we share with others in the society.

Our culturally-acquired knowledge and values are in contrast to the inborn knowledge we share with the animal world; inborn knowledge includes things like how to nurse at our mother's breast, how to protect ourselves from rain and cold, how to cooperate with others for our safety and survival.

The fact that we are coming to recognize that the world is dynamic, not static, and that we humans are participants in that dynamic cosmic process is one of the main perspectives I hope to pass on to you in this Legacy. To say it as briefly as possible: *reality is dynamic and we Earthlings are part of it!*

I know that by the time you are old enough to understand these ideas the very idea of human evolution-- not just cultural evolution but even our biological development-- will still seem improbable to some individuals in our poorly educated society.

That's because ever since Greek times, and even more so since the European Middle Ages, Western people just didn't consider themselves to be part of the natural world. That basic idea that we're part of the world simply wasn't included in our self-understanding.

You will remember from Chapter 1 that not knowing ourselves as part of the natural world is called "dualism." And, as I said there, dualism and the static worldview go together.

In philosophical terms dualism is a distinction between our physical body and a non-physical part, usually called our "soul" or "spirit."

That body-soul distinction has been such a basic assumption of Western culture's religious traditions for so many centuries that in our day most

people think it is the very essence of religion.

It's not. The problem comes from thinking that the matter of the cosmos is static and that, because we humans have a non-material component (our mind, soul, spirit), we are not part of the cosmos.

In contrast to that static and dualistic worldview, the dynamic perspective allows us see that life and mind are emergent developments *within* the ongoing cosmic process.

Life is more than inanimate matter, and mind (consciousness, soul, spirit) is more than living matter. In the evolutionary worldview, we can see that both life and mind are part of the physical universe.

We're not something alien. We belong!

To move beyond those old static and dualistic perspectives, and to embrace the evolutionary worldview that *includes* us, we need to think less superficially about how the physical world works.

We also need to think less superficially about how our own minds work.

Whether we call our personal awareness "self" or "mind" or "soul" or "spirit" or "psyche" (we have too many names for human consciousness!), we most especially need to understand just *how* our human self-aware consciousness functions.

So one of the main thoughts I want to share with you in this Legacy is our need to give serious attention to the fact that our conscious minds operate in *four* distinct ways.

Until recently science hadn't given much attention to just how human consciousness works. Of course we do have the ongoing studies of physical and cultural anthropologists, and the pioneering efforts of early psychologists such as Sigmund Freud and C. G. Jung.

And we also have the exciting research into the workings of the nervous system and brain by contemporary neuroscientists, such as Andrew Newberg at Thomas Jefferson University Hospital in Philadelphia. I have followed Newberg's work for many years specifically because he is interested in the neurological study of religious and spiritual experiences.

Despite these many efforts in what the psychologist Jerry Wright calls the areas of both the "hard and soft sciences," the *four-fold* or "quaternary" nature of self-aware consciousness hasn't yet become a common perspective

in our Western culture.

Interestingly, however, it has been known since early times outside of the Western world. We find that quaternary understanding clearly expressed in the archeological sites of prehistoric Europe's stone circles, in the mandalic art of Asia and Africa, and in the Medicine Wheel imagery found in many Native American societies.

I find the animal imagery of the Medicine Wheel to be especially helpful in conjunction with the work of the Swiss psychologist C. G. Jung. While Jung described the four-fold nature of consciousness in a scientific context more than a hundred years ago, we in contemporary Western society are just getting around to putting together these many bits of information about ourselves learned from the hard and soft sciences.

And putting it all together is a big job!

But it is exactly the kind of work we Earthlings need to be doing at this stage in our ongoing cultural development. Otherwise we will remain stuck in the static past.

This is why my main concern in this chapter is to emphasize for you the *dynamic* nature of the universe and of our human place in it.

The evolutionary perspective of modern science offers not only a developmental understanding of the physical universe but also a dynamic and transforming understanding of ourselves. It allows us to take our place in the ongoing and still developing natural world.

I'll share my understanding of the four-fold nature of our minds in Chapter 3. And in Chapter 4 I'll describe that especially important aspect of that "quaternary" perspective which, because it continues to be overlooked and neglected in our still-patriarchal culture, I call here "the missing fourth."

It's precisely that fourth aspect of our consciousness which we need to become aware of, in order to see clearly the dynamic nature of the universe and of ourselves as participants in it.

So these next two chapters, 3 and 4, are the beginning of Part II, the *Anthropos* section of this Legacy. As I said in the Introduction, it's twice

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as long as the other two parts (*Kosmos* and *Theos*) precisely because we have a great deal to understand about ourselves (*Anthropos*) in light of the dynamic-evolutionary worldview.

I hope you will find all this as exciting as I do!



Part II: *Anthropos*



Chapter 3. Our Four-fold Minds

Hello, again, Owen and Luke, Bitsy and Paige!

The main thought I've shared with you so far in this Legacy is that for an accurate picture of ourselves we need to understand the world (*Kosmos*) not as static but as dynamic, and to see ourselves (*Anthropos*) as active participants in the cosmic evolutionary process.

A Buddhist scholar, Joanna Macy, calls this enormous change in human self-understanding the "Great Turning." It is one of the biggest changes ever for all global humanity.

In the next four chapters I will be looking more closely at us humans, *anthropos*. We need to recognize that we are not only a result of cosmic evolution but also, because of our self-awareness, a unique form of the Earth's life.

Notice that I didn't say "unique in all the universe." As more and more planets are being discovered, it is increasingly likely that self-aware forms of life will be found to be common throughout the cosmos. Our perspectives are changing rapidly. I can remember a time in the 1960s when astronomers weren't even sure that there were any planets outside our own solar system.

The topic of this first chapter on *Anthropos* is the "quaternary" or "mandalic" nature of our human awareness. It is a four-fold understanding of personal consciousness. To me, this is one of the main perspectives we need for moving out of the static and dualistic views of Western culture's patriarchal past.

I need to mention first however that in a broad sense "consciousness" is not unique to humans. All living things have some form of an inner "within." Every life-form can actively respond to and react with the physical conditions of its external world. That's what makes it a living thing. In Biology, this inner awareness is sometimes called "agency."

Conscious agency is lacking in a piece of metal or a rock of course, but even the most elementary living things have it. One-celled life-forms like bacteria, for example, actively move *toward* potential food sources and *away* from harmful substances in their environment.

We also know that there is a clear increase in conscious agency as we move up the tree of life. Simpler living things, such as worms and mosquitoes, have some degree of a “within.” Animals with larger brains and nervous systems, such as cats and dogs and ourselves, obviously have a lot more of it.

It’s especially interesting that while the *structure* of our human brain is hardly different from that of other anthropoids (such as monkeys and chimps), the human form of agency is truly unique. We are not just highly aware of the external world. We are also aware of our own inner awareness. We’re “self-aware.” That’s no small difference!

Our unique kind of conscious awareness is the result of the enormously complex *workings* of our brain. It not our brain’s anatomy so much as its physiology-- the way it functions-- that makes it the most complex entity we know of in the whole physical universe.

It is important to know that each of us has more brain cells than stars in the Milky Way galaxy, and that every one of our brain’s cells can connect with 10,000 others. So in our brain there are about 100 trillion nerve connections! It is this *functional*-- rather than *structural*-- complexity that makes us unique among all of the living things of the Earth.

It’s also what makes each of us a *unique* individual person. We know from genetics that the chance of another human being in the whole history of the world having exactly the same brain connections that you or I have is extremely small.

It’s about one in 100,000,000,000,000,000,000,000,000,
000,000,000,000,000,000,000,000,000,000,000,
000,000,000.

No chance at all!

So it’s clear that the cosmic evolutionary process puts great value on human uniqueness. We don’t need philosophy or religion here. Our personal significance leaps out from a *scientific* viewpoint!

Our mandalic mind

Beyond the awesome fact of the uniqueness of each person, I think that the most amazing thing about personal consciousness is that it works in four distinct ways. It is that *four-fold* functioning of our minds which is the major idea I want to share with you in this chapter. As I've said, it seems to be one of the main perspectives we need if we are to move out of the static and dualistic worldviews of the past.

And there's evidence for it *everywhere*.

We can see the quaternary nature of our minds in the mandalas of the temples of India, for example, as well as in ancient stone monuments like the circle at Stonehenge and in the Medicine Wheel imagery found throughout the cultures of Native American people.

But we don't need to be Asian or Native American to know that our minds are constantly thinking in terms of "fours." Everyone is familiar with the four seasons of the year and the four directions: North, South, East and West. Many of us know that the Bible has four gospels: Matthew, Mark, Luke and John, and that there are four suits of cards in a poker deck: hearts, clubs, diamonds and spades.

Another familiar "set of fours" is the four elements from classical times: earth, air, fire and water. A bit less familiar are the Greek philosopher Aristotle's "four causes": material, formal, efficient and final. But there are many more sets of fours. Two especially familiar ones are the Medieval description of the make-up of human beings: body and soul, mind and spirit, and the basic components of the universe known from contemporary science: time and space, matter and energy.

When I first became aware of this four-fold characteristic of our minds, I started collecting examples. I have more than fifty now. But of those many "sets of fours" the two I find most helpful are C. G. Jung's psychological descriptions of the workings of our minds and the animal imagery of the Native American Medicine Wheel.

From what are obviously very different starting points, the Native American and the Jungian "fours" are both excellent ways of understanding the mandalic workings-- the "medicine" or *powers* and *energies*-- of our human form of conscious agency.

While the Medicine Wheel images are older and richer, Jung's concepts will seem a bit less complicated, so they're a good place to start.

Jung's fours

Jung distinguishes between our *perceptions* of the world around us and our *evaluations* of those perceptions. He notes that we have two kinds of each. It's the two perception functions, along with our two kinds of evaluations of those perceptions, which accounts for the fact that our conscious minds are "four-fold."

Jung's names for the four functions aren't too helpful, but we're stuck with them since they've been around for more than 100 years. Jung calls the perception functions "Sensing" and "Intuition" and he names our evaluation functions "Thinking" and "Feeling."

Here is a quick summary of how these four conscious functions work. With our Sensing function we perceive details, while with our Intuition function we look at the big picture and the patterns we find there.

Note that Jung says we cannot do both at the same time. We can perceive *either* surface details *or* the underlying patterns of the big picture. It's the familiar distinction between seeing the forest *or* the trees, the big picture *or* the details, the whole of something *or* the parts of it.

Our two *judging* functions work differently from the perception functions. Briefly, with our Feeling function we *evaluate* whether what we are perceiving is helpful or harmful, while with the Thinking function we judge whether or not our perceptions are accurate. As with the two perception functions, we can't do *both* of the judging functions simultaneously.

The judging functions have especially great evolutionary survival value. We wouldn't be here if our ancestors lacked them. Early humans who didn't pay attention to the dangers of their environment, for example, or who mistook real dangers for apparent ones, didn't live long enough to have many descendants.

Note that the four-fold workings of conscious agency is not something we have to be taught. It's in our genes.

The evolutionary process itself insures that we are always looking at our experiences in terms of both details and the big picture. It insures that we keep checking back. We are constantly judging the value and accuracy of our perceptions.

A major problem, however, is that we can be *culturally conditioned* with regard to which of the four functions we give greater attention. This is especially important in our contemporary culture as we strive to acquire the

“big picture” of the evolutionary perspectives of Big History and the New Cosmology. I hope to explain all that in some the detail in the next chapter.

But first we need a “big picture” of the four-fold perspective!

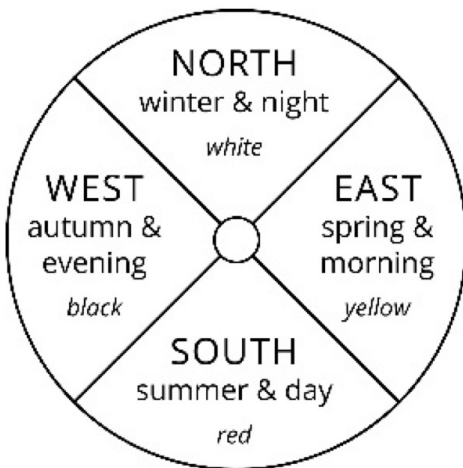
The Medicine Wheel fours

The Native American Medicine Wheel is much less easy than are Jung’s fours to describe briefly, but because it is expressed in images rather than concepts, it’s of even greater value. That may sound confusing, but you’ll see that it’s not.

On the Medicine Wheel, each of the four quarters is associated with an aspect of nature: the four directions (north, south, east and west), the seasons of the year (winter, summer, spring and fall), and the times of day (night, day, morning and evening).

Each quarter is also associated with a meaningful color. While it varies a bit among the tribes, the color is commonly white for the cold and snow of winter, yellow for the rising sun in spring, red for the warmth of summer days, and black for the approaching darkness of evening and autumn.

In words, a simplified version of it would look like the mandala below.



To this picture of the natural world the Medicine Wheel adds animal images associated with various aspects of our human “within.”

Here, too, there are some variations among the different Native American tribes with regard to which animals are depicted. The form of the Medicine Wheel I’m most familiar with comes from the peoples of the Great Plains. It has a White Buffalo in the north, a Green Mouse in the south, a Gold

Eagle in the east and a Black Bear in the west.

It may not seem obvious at first, but I hope you will see from the next few paragraphs that these animal images are excellent pre-scientific expressions

of the same understanding of conscious awareness worked out by C. G. Jung more than a century ago.

What Jung calls our *Sensing function* is imaged on the Medicine Wheel as the magical (“powerful”) White Buffalo of the North. This image evokes the earth’s snow and cold in winter and the darkness of midnight.

Persons with an especially strong White Buffalo function tend to be focused on the present, so they’re better than the rest of us at attention to details. They’re especially good at looking after our immediate needs for food and shelter, for example, and they deal amazingly well with medical emergencies.

Corresponding to the Jungian *Thinking function* is the image of the Gold Eagle of the East. The eagle flies high in the sky at dawn and is able to see for great distances. It evokes the freshness of the air on a spring morning and of all new beginnings.

Persons with a strong Gold Eagle function are especially attentive to logical reasoning and to the sequential flow of time, imaged so well by the Gold Eagle’s overview of the land it surveys from high up in the sky.

Our *Feeling function* is imaged on the Medicine Wheel by the Green Mouse of the South. This is especially connected with fire, heat and the warmth of a summer day. In contrast to the high flying Gold Eagle, the Green Mouse lives close to the earth. It can’t see very far and loves to hold on to everything. This personality is oriented to the past.

Persons with strong Green Mouse energy have a tough time letting go of things because they greatly value the closeness of personal relationships and the warm feelings of human connectedness.

What Jung calls our *Intuition function* is imaged on the Medicine Wheel by the Black Bear of the West, which evokes the shadows of evening and the autumn of the year. Its long, sharp claws are not intended for causing injury but for digging up healing herbs. The Black Bear is an image of a shamanic healer.

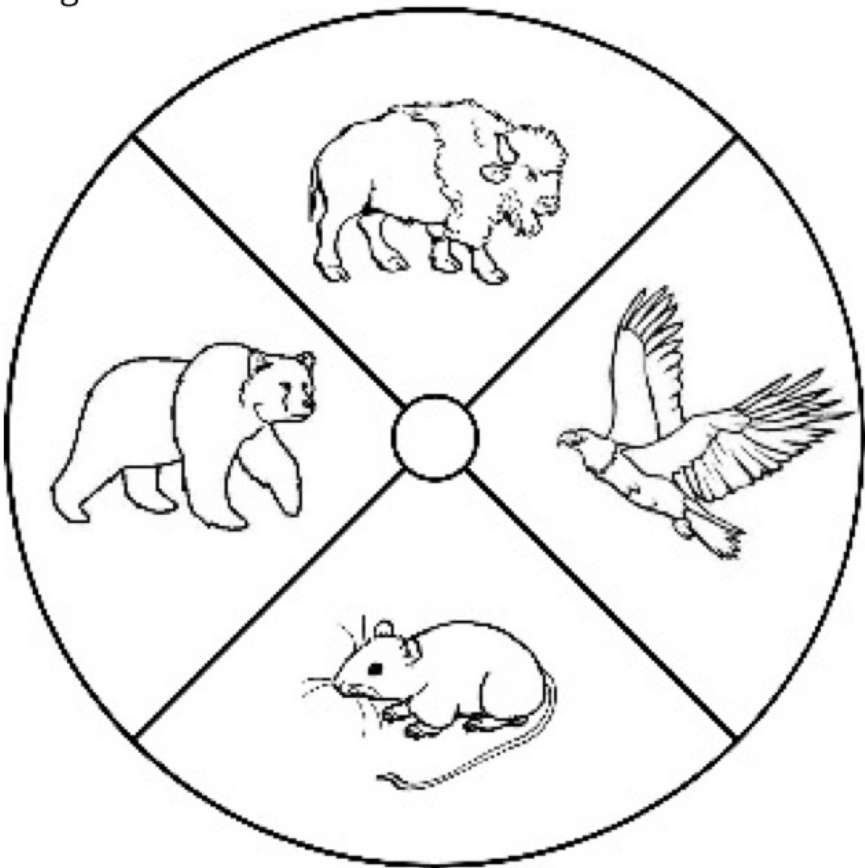
Persons with a strong Black Bear function are especially concerned with seeing the big picture, the future, and the significance of things. They are oriented toward goal-completion and wholeness, healing and good health, even the meaning and purpose of our existence.

It’s easy to see that the Gold Eagle of the East, with its focus on beginnings,

and the Black Bear of the West, with its orientation to the future, are opposites. But it's especially important to note that they are *not* exclusive opposites. They are *complementary*. Like male and female, we need them both!

If I tried to put all these verbal images into printed words arranged as I did above with the four directions, it would make for a very messy mandala.

But here's what a simple mandala looks like with just line-drawings of the four animals. I find this one especially helpful when we keep in mind the main concerns of the four functions which these spirit-animals represent: White Buffalo's focus on *immediate needs*, Golden Eagle's focus on *new beginnings*, Green Mouse's concern for *relatedness*, and Black Bear's focus on *healing wholeness*.



There's one more important way that we can understand the Medicine Wheel images. It's to see them in terms of the different moods and feelings we experience at the various seasons of the year and times of day.

The kind of consciousness awareness we have on a warm summer day, for example, is very different from how we feel on a cold winter night. And neither of those feelings is anything like the unique mood we experience on a bright spring morning or at the early sunset on an autumn evening.

I wish I were a poet, to express all this well. I'm not, but I have a good example of a dynamic Native American mandala which allows us to enter into the moods and feelings of Medicine Wheel imagery. It comes from a vision by the Lakota teacher Black Elk, who I mentioned in Chapter 1.

Here's how it's described by the Native American artist S. D. Nelson in his book *Black Elk's Vision*:

Galloping spirit horses appeared from the four sacred directions. To the west, horses snorted lightning. To the north, they kicked up a snowstorm. From the east, horses pranced with eyes that shone like stars at dawn. And from the south, horses appeared with wind-blown manes growing with grass and the leaves of living trees.

Black Elk had this vision when he was only nine years old. It influenced his whole life. And C. G. Jung said, when he learned of Black Elk's vision, that it was important for all humanity.

Eugene d'Aquili's fours

I have another example of four-fold awareness I want to share with you. It's from a very different source, one of my favorite scientific thinkers of the recent past, the Biogenetic Structuralist Eugene d'Aquili from the University of Pennsylvania. He was an older colleague of the neuro-scientist Andrew Newberg who I mentioned in Chapter 2.

Eugene d'Aquili referred to our instinctive drives to consciously observe and evaluate our environment as "cosmic imperatives."

He lists only three imperatives, so his view makes up what might be called an "incomplete mandala." But his three "imperatives" correlate so well with the animal imagery of the Medicine Wheel and with Jung's descriptions of the workings of our conscious minds that I think a fourth "imperative" is easily added.

D'Aquili says we have a *biological* imperative which has to do with our need for physical survival. As a drive or urge, it clearly goes with the Sensing function and White Buffalo image. And d'Aquili observes that we have a *social* imperative toward the cooperative efforts by which we meet our needs for safety and avoid harm. Just as clearly, this drive goes with the Feeling function and the Green Mouse imagery.

D'Aquili calls our third imperative *cognitive*. It is our need to know how the world works and to communicate our awareness of it to others. This cosmic imperative to share our perspectives is the basis of all human culture. It corresponds well with our sequentially-oriented Thinking function and with the Medicine Wheel image of the far-seeing Gold Eagle of the Dawn.

As far as I know, Eugene d'Aquili didn't name a fourth cosmic imperative, but it seems obvious to me that there is one. It's our need to know "what's happening" both in the world around us and in our personal lives. We're always asking "What's going on?" and "What's up?" We always want to know where are things are heading.

This future-oriented cosmic imperative corresponds closely with the perception function Jung named "Intuition" and with the Medicine Wheel's shamanic Black Bear image. It is especially important because it is the function of our minds which enables us to be aware not only of the cosmic evolutionary process but also, and especially, of our human role as conscious participants in it.

Grumps' fours

I want to take these ideas one more step. This sounds complicated (because it is!), but please stay with me. I can promise that if you do, you will see the great value of this effort.

The four-fold pattern of our conscious minds makes especially good sense when we match up these three ways of looking at the patterns-- Jung's consciousness functions, the Medicine Wheel images and d'Aquili's cosmic imperatives-- with the basic components of the universe as we know them from science: time, space, matter and energy.

Jung's Sensation function, along with d'Aquili's biological imperative and the Medicine Wheel's White Buffalo image are all clearly connected with *matter*. We're never free of needing to give our immediate and detailed attention to some pressing matter at hand.

The social imperative, the Feeling function and the Green Mouse of the South are just as clearly connected with *space*, as in spatial relatedness and our greatly valued sense of human community.

And d'Aquili's cognitive imperative, our logical Thinking function and the far-seeing Gold Eagle of the Dawn, are just as clearly related to the sequential flow of *time*.

In the same way-- and this is one of the most basic ideas I have to share with you-- the fourth cosmic imperative (which d'Aquili didn't name), along with Jung's fourth "big picture" function (which he called "Intuition") and the Medicine Wheel's image of the Black Bear of the West (concerned with healing, fullness and the future), all correspond with the *energy processes* of the universe.

Black Elk's vision expresses this especially well. He says that those spirit-horses coming from the West "snorted *lightning*."

In our society we know we are made of *matter*, we have a strong awareness of the immensity of *space*, and we are gradually acquiring a good sense of deep *time*. But the fourth component of the universe-- *energy*, and our orientation to healing, wholeness and the future that's still to come-- has been over looked.

This is no small problem. While Western people have gradually become comfortable with the scientific understanding of cosmic *matter*, we have not yet turned our attention to the big picture *energy* processes of the universe.

When it comes to the cosmic energy processes, we are still stuck in the *static* worldview of Greek and Roman times!

In popular science writing, for example, it's often mentioned that the hydrogen atoms in our bodies came into existence in the first few seconds of the Big Bang. And it is certainly an awesome thought that much of the *matter* of our bodies is in fact 14 billion years old. We really are, as poets like to say, "made of star-stuff."

But it's no less awesome that the *cosmic energy processes* also have been operating in the universe for the last 14 billion years.

Since the first moments of the Big Bang, the *energy* of the universe has been at work creating ever more complex realities: first atoms and molecules, then galaxies, stars and planets, and eventually life-forms.

I hope you took a nice break, so that by now there's a good chance that you are already asking yourself one of the biggest questions that comes up once we grasp this dynamic cosmic perspective about ourselves.

Why is such a profound understanding of our place in the universe still *missing* from our contemporary cultural awareness?

Why, for example, did Eugene d'Aquili not even *name* a fourth cosmic imperative which would correspond with our Black Bear Intuitive perception of the dynamic energy of the universe?

I'll describe my understanding of that "missing" fourth function of our minds in the next chapter. Meanwhile, I know this chapter has not been easy going. *Thank you* for hanging in here!

Make sure you take an extra-long break before going on! The next few chapters will be just as challenging. And, I hope, even more exciting.



Chapter 4. The Missing Fourth

Hello once again, Owen, Luke, Bitsy and Paige!

This chapter is my attempt to respond to that “one big question” which at the end of the previous chapter I note that you may already be thinking about: *If the New Cosmology is so significant, why is such a positive and dynamic perspective about the world and ourselves still missing from contemporary society?*

My answer in brief is that, for many centuries, Western culture simply *ignored* it.

We *overlooked* the mind’s future-focused and wholeness-oriented Black Bear function. Here’s what Albert Einstein is often quoted as saying about this strange cultural situation: “The intuitive mind is a sacred gift and the rational mind is a faithful servant. We have created a society that honors the servant and has forgotten the gift.”

Remember that in contrast to the Sensing function’s focus on matter and details, the Black Bear function is our mind’s ability to perceive the “Big Picture.” It’s oriented to the *energy* processes of the cosmos.

And that’s my main idea here: our *awareness of the cosmic energy processes* is what distinguishes the modern evolutionary worldview from the static and dualistic views of our patriarchal past.

And indeed it is a “sacred gift.” Our intuition function allows us to see the cosmic significance of our personal existence and of our communal, social and cultural lives, in ways the older static and dualistic perspectives never could.

Those patriarchal perspectives estranged the people of Western culture from the natural world. And the result, as the pioneering new cosmologist Thomas Berry noted, is that “we are *autistic* with regard to the physical universe.”

Today, however, thanks to contemporary science, we are becoming increasingly aware that we humans, along with the stars and galaxies and all the other living things of the Earth, are emergent results of the cosmic evolutionary process. And also, although more slowly, that as self-aware persons, we are conscious *participants* in it.

Seeing the world by way of our mind's Big Picture ability has enormous consequences for an understanding of our place in the universe. So in what follows I'll share with you some of what I think as especially important aspects of that self-understanding we have from the New Cosmology. To keep things simple, I'll limit it to seven big thoughts.

1. Awareness of energy. From the four-fold "mandalic" perspective, we can see *why* our present culture persisted for so long in the static and dualistic worldview of patriarchy. It's because in that old static worldview, *nothing* ever changes! Most people had absolutely *no* awareness of the dynamic processes of the physical universe.

2. Evolution and the four functions. The question about why the New Cosmology is still missing from our cultural perceptions comes down to this: we need a basic awareness of the *connections* between the evolution of the universe and the four-fold function of our minds.

I think those various connections are especially clear when we look at our awareness of the passage of time. In the *static* view, the *dynamic flow* of time from past to present to future is mostly just ignored.

Remember that our White Buffalo (Sensing) function is concerned with the *present*. It focuses on our wants and needs in the here and now, and is obviously necessary for our evolutionary survival.

But our Gold Eagle (Thinking) function is quite different. It doesn't focus on the past *or* the present *or* the future; it focuses on the ongoing *flow* of time.

And *logical (sequential)* reasoning-- about the causes of things and the actions we need to take with regard to them-- is the essence of practical life. If we don't ask questions such as "Where did that come from?" or "What will happen if I do this?," it's obvious that our very survival can be at stake.

Together, the two functions of Sensing and Thinking-- with their strong emphasis on sequential ideas and here-and-now details-- account for the great emphasis in American society on Science and Technology, History and Medicine, Law and Order. Americans at their best tend to be very practical people.

In contrast to both Sensing and Thinking, our Green Mouse Feeling function is oriented to the *past*. It's especially concerned with preserving already-in-place relationships. While the Sensation function is connected with *matter*, and the Thinking function is connected with *time*, the Feeling

function corresponds with *space*, specifically with our spatial relatedness to others.

We often describe our relationships in spatial terms. We say, for example, “I feel close to her” or “I want to keep my distance from him.” And we know there is safety in numbers. The great survival value of the Green Mouse Feeling function is that it promotes the active cooperation of many for the protection and safety of all.

Unfortunately, the patriarchal mind tends to give our relatedness function very little *conscious* attention; the result is that the Feeling function frequently shows itself in *un-conscious* and often quite negative ways. Examples are the racial hatred, sexual prejudices and religious fundamentalism found in American culture. It also shows especially in gross and blatant *indifference* to major social issues, from schoolyard bullying to gun violence and the denial of global warming.

3. Black Bear Intuition. While the patriarchal mindset greatly downplays our Green Mouse Feeling function, it doesn’t seem to be able even to acknowledge the *existence* of our Intuitive ability, where the focus is on the *future*. The Black Bear capacity to look at the *big picture* is quite literally missing from cultural awareness in our society.

It’s important to note that Black Bear Intuition is not about our immediate needs in the present (as is White Buffalo Sensing), nor about the logical consequences of our actions (as is Gold Eagle Thinking), nor even about our communal relationships (as is Green Mouse Feeling).

Black Bear Intuition is about our self-understanding, especially our most personal desires and intentions. And in the broadest sense, it’s about consciousness of the very meaning of our lives.

The fact that the phrase “the meaning of our lives” sounds a bit vague is itself a strong indication of just how absent this fourth function is from Western culture. It has been missing for many hundreds of years, and most especially since the rise of science and technology in the 15th century.

We know that technology and science have been tremendously successful in making our practical lives better; probably the best examples are medicine and modern dentistry. With their intense focus on physical details and logical reasoning, science and technology make very good use of our White

Buffalo and Gold Eagle functions.

But to a great extent, they have simply avoided the deeper issues about goals and purposes-- those future-oriented “why” questions which are the very focus of the “missing fourth” function. Clearly, modern science has some unfinished business!

4. Ends and goals. Two Greek words for “ends and goals” are *telos* and *eschaton*. A thousand years ago, those deeper “why” questions-- about meaning and purpose, the significance of things-- were referred to as “teleological” or “eschatological” issues.

For many centuries, teleological and eschatological ideas were thought to belong only to the highly specialized academic fields of philosophy and theology. So questions about the meaning and purpose of our lives have been essentially absent from Western society and culture.

But with one big exception.

That “exception” is the dualistic idea that the world is not our home and that we need to escape from it. With the rise of modern science, the people of Western culture kept pushing these deeper questions into the backs of their minds.

Even today, we still choose to ignore them. If they come up at all, we often dismiss them with an embarrassed laugh.

But they are not easily dismissed. As Black Elk said of his vision, “I saw more than I can tell, and I understood more than I saw.”

My hope here is to offer you a bit more background about this four-fold perspective, and so to help you make good sense of these not-easy-to-understand and often difficult-to-talk-about ideas. For a start, believe it or not, the old Greek philosopher Aristotle can help!

5. Aristotle’s four causes. In Chapter 1, I mentioned Aristotle’s “four causes” as an example of four-fold thinking. His names for them are “material,” “formal,” “efficient” and “final.”

Here’s a very brief summary of those four causes. The “material cause” refers to *what* things are made of, the “formal cause” refers to *how* they are made, the “efficient cause” refers *who or what* does the arranging or making, and Aristotle’s “final cause” deals with the *why* of things and their

significance.

“Final” here refers to something’s end in the sense of its purpose rather than its conclusion. When we hear a question like “To what end are you doing that?” we’re being asked, “What’s your purpose?”

When Greek thought was the dominant view in Western culture, all four of Aristotle’s “causes” were thought to be needed for a thorough explanation of anything. And they really are not such deep ideas in themselves. They are the kinds of “who, what, how and why” issues we deal with all the time in everyday life.

But when modern science began in the 15th century, the perspectives of the early scientists were just as static as those of the rest of the people in Western patriarchal society. And since “why” questions obviously don’t easily lend themselves to scientific experimentation, Aristotle’s *final* cause-- about the “ends” and “goals” and “purposes” of things-- was simply dropped from the concerns of Western science.

Eventually, however, even science itself became aware of change, evolution and the cosmic process. And, deep down, people really do want to know “What’s it all about?” and “What’s it for?” So science most definitely has some *unfinished business*.

6. The unfinished business of science. The universe itself seems to be forcing us to deal with these “why” questions about the meaning and purpose, the *significance* of things and of ourselves.

I’m especially aware of two big aspects in the unfinished business of science. One is our need to take into account an energy-focused “Big Picture” of the cosmic *process*. The other is to look at that Big Picture specifically in terms of cosmic *emergence*.

The “Unfinished Business of Science” is the topic of the 2012 book *Incomplete Nature: How Mind Emerged From Matter* by biologist-anthropologist Terrence Deacon, of the University of California, Berkeley.

Deacon is one of my favorite science thinkers. He deals with our understanding of a topic most scientists shy away from: the link between *cosmos* and *anthropos*. He is the author of a 1997 book dealing specifically with the cosmic-human connection, *The Symbolic Species: The Co-evolution of Language and the Brain*.

But it's in his 2011 book, *Incomplete Nature*, that Deacon is most explicit about the "unfinished business of science." We need to look, he says, "to the energy processes" by which the matter of the world becomes alive and aware. And in order to do this, he points out, we need to recover an understanding of *telos*-- the *end* or *purpose* or *goal* of physical processes. That's Aristotle's "final cause"!

Deacon notes that in everyday life we always act as if we have goals for what we do. We *presume* that purposes are something real. He emphasizes that we need to understand our intentions and values simply because they make a great deal of difference in the real world.

The challenge, he says, is to look not just at material objects but at the energy processes which physical matter undergoes. He stresses that in every case, it is physical limitations-- material "constraints," as he calls them-- which are what move the dynamic energy processes to new levels of emergence.

It's important to keep in mind one of the main thoughts I emphasized in the previous chapter: when we look at time, space, matter and energy from a mandalic perspective, it is not by Sensing, Feeling or Thinking, but precisely by that fourth function of our minds-- our Black Bear Intuition ability-- that we perceive the dynamic *energy processes* of the universe!

And when we look at those energy processes, we see that something always results from them. That's the basic idea of "emergence."

7. Cosmic emergence. The idea of "emergence" is central to Deacon's perspective. Although it's a relatively new (20th century) understanding in science, the process of emergence is as old as matter and energy. This is an especially important part of my Legacy for you.

The basic idea is that while matter, life and mind are clearly distinct realities, they just as clearly are the *results* of the evolutionary process. As Deacon says so well, this means that we don't need to appeal to an external source, as dualistic thought does, to account for the existence of life and mind in the universe.

As I hope you can see, this understanding of *emergence* shows us clearly that the old static worldview of patriarchy simply isn't accurate.

When we look at the Big Picture-- at all the various kinds of things that have emerged in the world-- we see that there's not just random change with

the flow of time. The very *structural complexity of things changes*, so that *new things* emerge with *new* characteristics.

Nowadays, even kids in elementary school learn that when atoms come together to form molecules, new chemical properties emerge. Probably the most familiar example is the emergence of water from the joining of the atoms of hydrogen and oxygen gasses. The *emergence* of new things with new characteristic properties is what Chemistry is all about. (I'm glad I was able to major in Chemistry in college!)

Today we can see that *everything* in the universe is the result of the emergent process. New things have been emerging since the first moments of the Big Bang. Stars and planets emerged from atoms, chemical compounds emerged from elementary elements, life forms emerged from Earth's inorganic materials, and we humans, with our unique form of conscious awareness, emerged from our earlier animal ancestors.

Among mammals, a strong correlation exists between increasing complexity, in terms of the organization of the brain and nervous system, and the emergence of a greater degree of "agency."

Dogs and cats have much more of this conscious "within" than do worms or insects, and humans obviously have a lot more than dogs and cats. No one argues with that. The main idea is clear enough: the increasing complexity of life forms-- and specifically the existence of our own minds-- is a natural aspect of the cosmic emergence process.

And with regard to ourselves, as Deacon stresses, there are many goal-oriented realities such as *purpose, value, the function of things, "how-to" information, meaning, personal experience* which are important to us. His point is that these kinds of realities are not embodied in physical things or static material objects. They *emerge*, rather, from the dynamic processes which generate them.

Deacon also notes that if we write off aspects of personal experience such as purpose, meaning and goals, "it makes us nothing but machines, robots." And he emphasizes that if we really were robots, "there would be no caring, no cared for, no kindness, no sharing of beauty and discovery and sorrow, no value to our pains and pleasures."

Indeed, as he says, for each of us there would be no "me" at all. Reductionist science, lacking attention to energy processes, "is impotent to explain the mystery of ourselves."

On the other hand, adds Deacon, if we accept the dualistic view that life and mind are real because of an intervention from outside the physical

universe, “that makes us aliens in our own world.”

Taking into account *both* the dynamic processes of the cosmos *and* what emerges from them “will make it easier,” as Deacon stresses, “to increase our sense of belonging in the universe.”

He emphasizes that when we look to those energy processes, we can see that there is *complete continuity* between cosmic matter, biological life and the human mind. The emergence of these attributes of life and mind,” says Deacon, “can be understood without attributing them to an external source *or* denying that a real threshold has been crossed.”

“The unique characteristics of the fabric of life and mind are woven from the same matter and energy that constitute the rest of the world.” So after 500 years of modern science, concludes Deacon, “maybe we can finally stop saying to ourselves, I don’t belong here.”

This understanding of *emergence* in the cosmic process is an enormous step out of the patriarchal prison of static dualism! Many important concepts flow from it. So I will end this chapter with a brief summary of what I think are three of the biggest ideas resulting from these new perspectives.

Perhaps the biggest idea is that when we “look to the energy processes,” as Deacon urges us, we can see that the entire universe is simply not, in any sense, a static thing. It’s a dynamic process.

A second big idea is that when we see the universe as an ongoing process, we also can get a sense of the direction in which it’s heading. It is clearly moving toward ever-increasing complexity and consciousness, toward “life and mind,” as academics like to say. And that includes not only plants and animals and ourselves, but also our relationships, our families and friends, and all the communities, societies, ethnic groups and diverse cultures of our planet Earth.

The third, and most important, big idea comes from the fact that the most complex reality that we know of in all the universe is the conscious functioning of our own brain. This is what Deacon calls “the mystery of ourselves.”

Our most intimately personal experience of growth and development is a fundamental aspect of the evolutionary process.

When we take into account that sacred gift, the “missing fourth function” of our minds, we can see that at our deepest level, you and I are central to the whole cosmic story. We’re *not* “aliens.” We belong.

So thank you once again-- Owen and Luke, Bitsy and Paige – for hanging in there with these challenging and wonderful ideas!



Chapter 5. Attuning to Cosmic Energy: *Ritual*

Hello again, Owen and Luke, Bitsy and Paige!

When we recognize how radically different evolutionary ideas are from the static views of patriarchy, we quite naturally begin to ask practical questions about how we fit into that dynamic cosmic perspective.

One practical question is the issue of how we humans, as individuals and social creatures, may intentionally go about attuning ourselves to the evolutionary process. Can we personally, consciously and deliberately, plug-in to the energies of the universe?

A second practical question is that, if we *can* plug-in to the cosmic energies operating within us, how do we make use of them? Can we actually *cooperate* with the dynamic workings of the universe?

It seems that if our Paleolithic ancestors had been asked such questions, they would have answered, “Well of course!” Apparently Earthlings everywhere have always *presumed* that the answer to those questions is an obvious ‘Yes. We’re part of it all!’

So it’s not surprising that there’s an old Sanskrit word for the means by which we are able to attune ourselves to the cosmic process. That term is *rta* and from it we get our word “ritual.”

It’s also not surprising that there’s an old Latin term which has long been used to describe our efforts to make good use of that cosmic energy operating within us. That word is *spiritus*, which means “energy” and from it we get the English word “spirituality.”

I’m aware that “ritual” and “spirituality” sound like religious terms. But in the evolutionary perspective of Big History and the New Cosmology we can understand them much better as practical *human* concerns.

So *ritual* in Chapter 5 and *spirituality* in Chapter 6 will make up the two big topics in this second half of the *Anthropos* (“human”) part of my Legacy.

You should expect to find these two chapters at least as challenging as the previous ones. I can promise that you will find them even more rewarding!

I had a tough time deciding which topic should come first, since they are so inter-related. And both, alas, are poorly understood in our still patriarchal cultural context. I finally decided to start with *ritual*.

One of the most important thing we need to recognize about *ritual* is that it is at least as old as humanity.

We know from cultural anthropology that probably since the dawn of human history our ancestors used what today we call “sacred rites and ceremonies” to consciously connect with the order of the universe.

You may have seen pictures of the famous bear shrines found in the caves of Switzerland. Those shrines are 40 or 50 thousand years old. And scientists have found ritual burial sites that are even older, some going back 300,000 years.

Studies of those prehistoric graves indicate that the bodies of our Paleolithic ancestors were often anointed with red earth in preparation for burial and that tools, food and various personal items were often left at the gravesite. Some evidence indicates that the mourners even scattered the graves with flowers, as we still do today.

We can see then that ritual “in our genes.” Ritual is, in fact, an extension on the human level of the cosmic patterns we see in nature, especially in the behavior of birds and animals.

That means that ritual is even *older* than we are! If we step outdoors on a spring morning to greet the sun and breathe in the fresh air, we’re not doing something all that different from what birds are doing when they’re singing in the trees at dawn. We’re just doing it in our own uniquely human and personal way.

Part of the problem in understanding ritual is that the old dualistic religious attitudes are still common in our culture. So it is especially important to keep reminding ourselves that human beings are not souls trapped in bodies. We’re not trying to escape from the world.

We are what the evolutionary worldview of modern science shows us to be, nothing less than personally self-aware forms of the emergent universe. In the words of the famous evolutionary biologist Julian Huxley we are “the universe become conscious of itself.”

And just like the rest of the universe, we are still *in process*.

When we move beyond the static and dualistic perspectives of patriarchy-- when we follow Terrence Deacon’s urging that we consciously “look to the energy processes” of the cosmos-- we can get a pretty good understanding of ritual. We can see that ritual’s role is to touch us and exhilarate us. Ritual provides us with the life-energy we need for our individual growth and

development, and for our uniquely personal and creative participation in the evolution of the universe.

This is one of the main ideas I want to emphasize for you in this first part of Chapter 5. Ritual doesn't take us out of the world. Ritual connects us *with* the world. Ritual *empowers* us to consciously and intentionally participate in the world's workings.

At our most intimately personal level, the energies of the universe are urging us to self-actualization. I think the best way to say it is that they are *calling* us, or even *inviting* us, to our personal self-realization.

At that very deep level, we experience ourselves as having a "cosmic imperative" to become who and what we are and who we feel called to be. *Ritual empowers us to "realize" in both senses, to understand and to make real, the "mystery of ourselves."*

By now you are probably wondering how your grandfather got into all this. I can't give you a simple answer but this seems like a good place to include some personal background.

I can tell you, for a start, that ritual and sacred ceremonies, in the broad sense of the traditions and customs of the various ethnic groups and cultures of the world, have been a major interest in my life since I was about eight years old.

As an adult I became aware that I seem to have been born with some practical skills in helping people to do sacred rituals. I have something of a knack for helping set up a good context for rituals to work well. It's an odd talent, to be sure, but it seems to be inborn, in the same way some people are born with an especially good ability to play basketball and others are at ease with computers from an early age.

But unlike those skills, it's a talent which makes little sense in our still-patriarchal society. And it won't surprise you to hear me say that that's because the source of our awareness of, and need for, ritual is our mind's "missing" Fourth Function.

I was born with the sacred gift of a strong Fourth Function and thanks to my family was fortunate to have many opportunities to use it in observing the patterns and processes of nature. The every-changing night sky, and especially the growth of living things, grabbed my attention from an early age. I was about ten years old before I learned that such things are called

“science.”

Learning about the various ritual traditions of the world has been my life-long fascination. Not just the Judeo-Christian and Islamic traditions of the Western world but also the Buddhist and Hindu traditions of Asia and India.

And I found myself especially strongly attracted to the sacred rites and ceremonies of surviving “tribal” peoples such as Australian Aborigines and Native Americans. Their rituals go back to the hunter-gatherer societies of Paleolithic times.

I have always felt a bit awkward about my interest in these topics. I didn’t know until I was an adult that they are part of what’s called “cultural anthropology.” Had I known it existed I would probably have majored in Anthropology in college.

As it was, I was the very first person on either side of my family to go to college. And I was lucky to have a nearby college (now St. Joseph’s University in Philadelphia) where I could take courses in the at least somewhat similar areas of philosophy and theology while I was majoring in science. I started in Biology, but later moved to Chemistry.

Eventually I got two master’s degrees. One was in science (from Wesleyan University in Connecticut) and one in religious studies (from New York Theological Seminary). My main interest both in science and in religion has always been more practical than academic. I was, and still am, most interested in how science and religion fit together.

The best I can say about “how I got into all this” is that I seem to have a personal calling, a “cosmic imperative,” specifically with regard to ritual, to help people understand how it works and how to do it well.

I mentioned in Chapter One Thornton Wilder’s play, *Our Town*, which you probably encountered in a high school English class. One of the characters in *Our Town* is called the “stage manager.” He mostly works behind the scenes but he also take an active part in the play. His main job is to help keep things moving along nicely.

In some Native American ceremonies there’s a person with a similar role called the “roadman.” Over the years, I’ve found that names like “roadman” and “stage manager” seems to describe fairly well my calling with regard to ritual.

It’s definitely an odd calling! But obviously it’s why I’m writing this Legacy for you. I want to share with you these unconventional, but to me profoundly

important and *practical* ideas about the world and ourselves which our “missing” Fourth Function provides to us and to which sacred ritual gives us access.

So in this chapter I’m sharing something of what I’ve learned specifically about *ritual* over the many years of my life. Many of these ideas won’t be at all familiar. So once again, please be patient!

One of the most interesting things about these ritual-related concepts I want to share with you is that, because they are so very different from conventional patriarchal ideas, they tend to make sense only in terms of one another.

We just have to jump in and swim. In what follows, I hope you are willing to get wet and splash around a bit! *Question everything!*

1. Cosmic Order. Because ritual was so greatly misused by patriarchal religious authorities the word “ritual” has taken on a strongly negative meaning in present day culture. “Ritualistic,” for example, is a word often used to describe the kind of pathological behavior demonstrated by repetitive and obsessive-compulsive actions. But even when it’s not considered pathological, almost all ritual activity still tends to be dismissed as “nothing but superstition.”

“Ritual” however has a very positive meaning. It comes as I’ve said from a Sanskrit word *rta*, which means “the way the world works.” *Rta* refers to the movement of the sun and stars, the changing seasons, and the growth of living things.

That includes ourselves! Since ancient times the “*order* of the universe” was considered to be a cosmic wisdom guiding the workings of our minds and hearts through all the changing seasons of our lives.

There’s one small place I know of where this understanding of cosmic wisdom guiding the order of the world has been preserved. It’s in a fifteen-centuries-old hymn which has become a familiar Christmas carol, *Come, O Come, Immanuel*. It’s based on ancient Christian prayers for the week before Christmas.

The prayers are called “*O Antiphons*” and the title of the first one is “*O Wisdom!*” Throughout the world, it is still prayed by Christians in many

denominations exactly one week before Christmas.

The words are “Come, O come, thou Wisdom from on high, who *orders* all things mightily.” Some translations say “who orders all things with great power and might.” The original Latin text says “who orders all things *sweetly*,” since in ancient times “sweetly” meant something like “especially well.” Today we might say “neat” or “just right.”

This hymn is a strong expression of our human desire, which is especially intense at the dark time of year surrounding the winter solstice, to be guided by the presence of that same wisdom and energy of the universe which *orders* all things sweetly, neatly, well.

2. Personal Empowerment. When we use the intuitive insight of our “sacred gift” to look at the Big Picture of reality, we see that our personal growth and development by which we strive to become ever more deeply “who and what we are” is empowered by the same cosmic ordering processes from which we along with the sun and moon and stars and all the living things of the Earth have emerged.

So we see that ritual and ceremonies are the age old means by which we can consciously tune in to the wisdom of those dynamic energy processes of the world. The role of ritual in our personal lives makes good sense when we recognize that our hearts and minds are empowered by that same cosmic energy which “orders all things well.”

While this understanding of human empowerment by way of the cosmic process may seem unfamiliar, it is not new. People have been using our Black Bear intuitive ability to experience the basic patterns of the world’s workings for many thousands of years. In tribal societies individuals who have an especially strong Fourth Function awareness are the community’s leaders and healers. In anthropology the term used for such persons is the Siberian word “shaman.”

Early anthropologists first encountered shamanic individuals in Siberia in the 1700s. Those Western scientists were so out of touch with their own Intuitive Fourth Function in terms of energy processes and ritual that they considered the Siberian shamans to be mentally deranged.

We’ve come a long way since then! Today we can see that the shamanic personality isn’t just a trait of primal peoples but a characteristic of every

human person. It's integral to all of us.

3. Liminality. “Limen” is an old word for a threshold or doorway. It is used to refer to those in-between times and places which we need to pass through as we move from one phase of our lives to another. Today we would call them “portals.”

We may experience ourselves in a liminal place when we are standing at the edge of the ocean or in a secluded spot in a park or woods, wherever we find ourselves alone with nature. And there are many “thresholds” in the natural times and seasons such as the breaking of dawn each day and the coming of autumn each year. These thresholds are important because at those liminal times and places we are more easily attuned to *rta*, the order of the natural world.

The major events in our lives such as attaining puberty or getting our first job are also liminal occasions. Maybe the best example of such a liminal event is our own birthday. But we experience many other liminal moments in our lives. Getting married, the births of our children, the deaths of our parents. All these events are *thresholds* in our personal and social lives. And they are as much cosmic occurrences as are the appearance of the full moon each month and the coming of spring each year.

It is not surprising that rites and ceremonies work especially well at those transitional places and times when we are more open to “how the world works.” When we stand at a threshold we can more readily join ourselves with *rta*, the orderly workings of the universe. What is specifically engaged in those liminal contexts is the “sacred gift” of our Intuitive Black Bear form of awareness.

Even persons who consider themselves to be absolutely non-religious feel a need to ‘ritualize’ these times of transition and moments of passage. Anthropologists call such times “liminal occasions.” In the old Celtic traditions, they are called “thin times.”

To a great extent, our still-static patriarchal culture simply doesn't recognize the liminality of special times and places. And so it almost totally misses an understanding of our basic human need for ritual.

I want to emphasize for you here that ritual is a natural human activity. It is in our genes to consciously attune ourselves to the wisdom of the universe. We have a cosmic imperative, given to us by the evolutionary process itself,

to strive for our social and cultural development and for our own personal self-actualization.

I think these basic ideas about liminality can be summed up by saying something like this: *rta* (understood as “ritual”) is what *we* do in order to participate in *rta* (understood as “what the *universe* is doing”). In this double sense, *rta*-- *ritual*-- is about nothing less than the very meaning of our lives and the cosmic significance of our existence.

That’s why this concept of liminality is so important. We know from psychotherapy that without a sense of purpose, people grow restless, depressed, open to addictions. And this clearly is what has happened to much of modern Western culture and American society, with its inability to move beyond its patriarchal obsessions with money-making and the use of political and military power to control others.

In brief, we need an understanding of *liminality* if we are to consciously experience and enter into the meaning of our lives.

4. How ritual works. A basic idea to deal with here is the question of just *how* each of us can personally experience the dynamic energies of the cosmos operating within us.

Over the centuries many sensitive individuals have addressed this issue, from the shamanic healers of hunter-gatherer societies and Moslem Sufis in the Middle Ages to many modern thinkers.

Besides the Swiss psychologist C. G. Jung, I think some especially notable modern thinkers are the French religious scholar Henry Corbin, the anthropologist Edith Turner, and the Russian-Jewish philosopher of history and science Alexandre Koyré.

You may be surprised to learn that while their terminology differs (as we would expect), they all respond in very much the same way to the question of *how* each of us can personally experience the dynamic energies of the cosmos operating within us. From the Paleolithic shamans to modern psychologists and anthropologists, they all say the same thing: that we experience the energies of the universe working in us by way of *images* and *stories*.

Images and stories?

At first, that makes no sense! But once again the problem is the absence

in our culture of the mind's Fourth Function.

Without an understanding of the mandalic nature of our self-awareness, we simply can't make much sense of the idea that it is by way of images and stories that we experience the energies of the universe operating within us.

So if we are to understand what ritual is and how ritual works, we need to look closely at the idea of *story*, specifically in terms of our conscious mind's ability to experience the *images* which stories evoke in us.

5. Images. In patriarchal culture our mental images usually are dismissed as "nothing real." An understanding of our ability to consciously perceive and enter into the significance of imagery has been almost totally lost.

Of course we can't understand images and stories as expressions of the cosmic process if we don't think that there *is* a cosmic process. But in an evolutionary context, we can understand things differently.

Just as we can perceive cosmic processes outside ourselves such as the motion of stars via our senses, so we can perceive the patterns of the cosmic process which are active *inside* us via our imaging capacity.

The anthropologist Edith Turner, author of the 1992 text *Experiencing Ritual*, explicitly makes the point that such deep experiences "can only be conveyed through stories."

And here's how Alexandre Koyré, using his philosophical language, describes our imagining ability. It is "the magical intermediary between thought and being, the incarnation of thought in image."

He's clearly saying that what makes images and stories real is that they have the power-- the "magic" in his old-fashioned wording-- to *link* our inner self-awareness with the outer world around us.

C. G. Jung's wording is also helpful. He uses the word "archetypes" to describe the energies of the universe making themselves known to us. Jung emphasizes that our images are representations of the energy patterns of the evolutionary process in terms of how they are at work within each one of us *personally*.

The cultural historian and cosmologist Thomas Berry whom I mentioned earlier says of these archetypal experiences: "They come from so deep within us that they seem to come from without."

These archetypal energies are known to appear throughout our life sometimes as friends, sometimes as foes. They show up in our daily lives,

and if we pay attention to them, they help us. So we need to understand our personal experience of the cosmic energy patterns broadly, in terms of the feelings, moods, hunches and personal inclinations which ritual stories and images evoke within us.

The cosmic energy patterns can also take the form of personal “presences.” We may experience the presence of a departed grandmother or a favorite uncle, or of some other respected person who has long been important to us. But these “personal presences” can also appear in animal forms such as the power animals and spirit ancestors commonly found in many Native American stories.

C. G. Jung says that when these presences show themselves to us we should talk to them and listen to what they have to say. His point is that when we give them our attention, in whatever forms they speak to us, those cosmic energy patterns and archetypal processes help us to know ourselves and thus urge us on to our personal growth and self-development. That’s precisely how images and stories work.

6. Stories. Thousands of years ago, our hunter-gatherer ancestors gathered around fires at night and told stories just as we still do today on a camping trip. Storytelling is a natural human activity.

The circle of light and safety against the dangers of the forest at night would have been an especially powerful liminal context for our ancestors. We can still feel something of that liminality nowadays in the magic of a Yule log burning brightly in a fireplace at Christmas.

Our inner shamanic nature responds powerfully to that kind of setting for storytelling. We have indeed come a long way since shamanism was considered a form of mental illness!

One especially good book for understanding this basic human phenomenon has the simple title, *Shamanism*. It’s by Mircea Eliade, a Romanian historian of religion. I heard him speak at Brown University in Providence, RI, many years ago.

His book was first published in 1951 and its subtitle, *Archaic Techniques of Ecstasy*, indicates the understanding at that time. While shamanic persons weren’t considered to be mentally ill at that point, they were still thought to be quite extraordinary individuals.

A more democratic understanding of shamanism is found in Steven

Larsen's 1988 book *The Shaman's Doorway*. Its subtitle is *Opening Imagination to Power and Myth*.

The word "myth" here is simply another name for story, so Larsen's subtitle includes all the basic ideas about ritual that I'm trying to describe in this chapter: *limen, imagination, imagery, myth, story, cosmic energy*.

It's a wonderful summary, in just six words, of what ritual is all about. And Larsen uses it to emphasize that myth and ritual belong not just to shamans but to all of us. Quite literally, *every* human being has the power to pass through "the shaman's doorway."

I haven't used the term "myth" previously because I've been trying to keep these thoughts from being too complicated. ("Not too successfully," you are probably thinking!)

The reason I've avoided using "myth" for "story" is that in our patriarchal society the word "myth" has come to mean "a false statement." But "myth" is simply the term cultural anthropologists and others who study folklore use to describe the stories people having been telling for countless generations about our participation in the workings of the world.

So myth and ritual go together. Just *how* those meaningful stories are told and acted out in sacred ceremonies varies greatly, of course, from one culture to another. But every society and ethnic group on our planet has some versions of myths, stories and ritual to express their communal self-understandings.

Since it's quite likely that self-aware life-forms have emerged elsewhere throughout the universe, we can expect that they too have evolved their own unique "extraterrestrial" forms of storytelling and ritual.

Far from being a form of mental illness, shamanic sensitivity to images and stories seems to be a healthy characteristic of the whole emergent universe. Specifically at the level of persons (*anthropos*), it is an essential part of "how the universe works."

7. Transformation. The single most important idea that I want to share with you in this chapter is that images and stories have the power to change us.

But American society pays very little attention to the transformation process. It's simply not important in the still-static perspectives of our patriarchal culture. And yet, our personal transformation-- our growth and

development as part of the cosmic process-- is what we're all about. It's what every form of life on Earth is all about!

We need better education.

I have a small but clear example that can help us make sense of the concept of transformation. The Greek word for "transformation" is *metamorphosis*. And that's the same word used in Biology to describe what happens in a *chrysalis*.

Chrysalis is also a Greek word, and I'm sure you remember what it means. And I know you remember what results from it, too. You have seen the emergence from the chrysalis of the beautiful transformed butterfly which started out as a "very hungry caterpillar."

If the wisdom of the universe can do that for a caterpillar munching on milkweed leaves, imagine what it can do for us when we make good use of the images and stories available to us in myth and ritual!

Myths are power-stories. And rituals are power-actions.

Myths and stories "grab our attention" and "speak to us." They help us to become aware of, and thus to make real and actual, our personally unique and creative place in the cosmic process.

So stories and rituals are both an *invitation* and a *challenge*. They impose on us a "cosmic imperative" in the most authentic sense, to *work* at fulfilling our unique role in the evolution of the universe.

They can effect that kind of dynamic *metamorphosis* of our personal self-awareness because they have the *energy* and *power* we need to link us, at the deepest level of our inner personal consciousness, with the workings of the universe outside ourselves.

Ultimately what emerges from that dynamic empowerment process which we experience via images and stories is nothing less than the very meaning of our lives and the purpose of our existence.

I think that's the understanding which best puts all these ideas together. Myth and ritual help us enter into the "mystery of ourselves."

We're not intended to remain caterpillars!

Owen and Luke, Bitsy and Paige, I hope you have survived jumping in and swimming around in these many deep thoughts! As I've said, they all go together and only make sense in terms of one another. I hope you now have

a fairly good idea of how they are all connected.

So many ideas! And none of them easy to describe well!

But these are a major part of my Legacy for you. They are, as I've said, the *tools* we need for taking our place in the universe.

Just *how* we *make use* of those tools is the topic of my next chapter.



Chapter 6. Using Cosmic Energy: *Spirituality*

Hello, again, Owen and Luke, Bitsy and Paige!

In the previous chapter I described for you two very basic ideas which I called the “tools” we need for taking our place in the universe.

One is our *awareness* of the dynamic cosmic order, the *wisdom* of the universe. The other is our *shamanic ability* to tune in, by way of *images* and *stories*, to the energies of the cosmos that are at work within us.

The only term I have available for talking about putting these “tools” to practical use with the cosmic energies is “spirituality.” And that certainly doesn’t sound much like “tool use.” So this chapter is a bit more difficult for me to write than the others. Once again I ask you, please be patient.

The basic problem is that like the word “religion,” “spirituality” is still understood in our society almost exclusively in a patriarchal sense. In the old static-dualistic context, which knew nothing of emergent evolution and our calling to take an active part in it, for many centuries creative self-aware persons were urged (for their own good!) to withdraw from the world.

So the original dynamic understanding of *spiritus*, as the energy and power of the universe operating in us, got lost. And for long time *spirituality* was understood in Western culture only in the negative and dualistic sense of disdain for the world, rather than in the positive sense of our participation in the world’s workings.

A major problem is that the word *spirit* is one of the most ambiguous words in the English language. It can mean everything from alcoholic drinks (as in “wine and spirits”) to an all-encompassing, non-physical and divine reality (as in “the Great Spirit”).

Spirit can also refer to departed ancestors and even to ghosts (from the German word, *geist*, which simply means “spirit”). You may know the word *zeitgeist* (the “spirit of the times”) for example, and I’m sure you have heard references to the “Holy Ghost.”

It’s a mess! So I need to start from scratch to try to make sense of *spirituality*.

1. *Spiritus*. The word *spirit* comes originally from a Latin term for power and energy. It is related to similar words in many languages such as *chi* in Chinese, *pneuma* in Greek and *ruah* in Hebrew. They all refer to “air,” “wind” and “breath.”

Essentially, *spiritus* is the power and energy of the universe at work in the natural world and in ourselves. It is precisely that life-breath and energy of the universe to which we humans attune ourselves by way of ritual.

So spirituality, then, is what we do with that spiritus-energy, in terms of our personal growth and development. It is how we make use of that power in the individuation process for our self-actualization.

“Being spiritual,” then, has nothing to do with disdain for the world. Just the opposite! It means paying attention to the cosmic imperative within us to become who and what we are at the deepest level of our being and thereby contributing to making the good world better.

There’s one place I know where “spirit” is still understood in this original sense. Even today, the Russian Orthodox Christian tradition speaks of “being in the Spirit” and “possessing the Spirit.” The Slavic people have a famous love of Mother Earth and “spirituality” for them clearly means being conscious of and responsive to the empowering energy, the *spiritus*, of the world.

Here’s a bit of the history of use of the word “spirit” in Western culture.

The very first words of the creation story in the Hebrew Bible refer to the holy *spiritus-energy*, where it is described as “hovering over the face of the waters of the world.” Those words were written by Jewish sages more than 25 centuries ago.

Roughly 15 centuries later, but still more than 800 years ago, a famous Medieval thinker, Thomas Aquinas, made this observation: “The same *spiritus* that hovered over the waters at the beginning of creation hovers over the mind of creative persons at work today.”

Although it hasn’t been understood that way for many centuries, creativity and the cosmic *spiritus* go together.

In science the link between the dynamic energy of the universe and human creativity was noted early in the 1800s by the famous European geologist and explorer of South America, Alexander von Humboldt. He put

it very simply: “The roots of our spiritual life is the cosmos.”

Surprisingly, that was several decades before Charles Darwin’s famous voyage around the world on *HMS Beagle*. So Western culture’s movement out of the patriarchal religious worldview has been slow. It is an immense cultural change, the biggest ever in Western society.

I’m writing this Legacy with the hope that it will be of help to each of you individually in making that cultural transition a bit more smoothly.

2. “Spiritual, not religious.” Sometime in the second half of the 20th century, young people in America began to use the catchphrase “I’m spiritual, but not religious.” It was their way of saying that they were concerned with the dynamic and creative aspects of personal experience, with real life in the real world, but not with the negative and dualistic views of life promoted by the institutional forms of religion still common in our culture.

It was a significant step beyond the static perspectives of patriarchy.

In the evolutionary context we can see much better that being “spiritual” means paying attention precisely to those kinds of realities which Terrence Deacon names, such as *purpose, value, meaning, personal experience*. Remember that Deacon says these realities are not embodied in physical things but *emerge* “from the dynamic processes which generate them.”

Today, the phrase “spiritual, but not religious” has become an accepted way to distinguish between giving our attention to the cosmic-energy impulses within us rather than being dependent on the patriarchal views of the authoritarian religions of the past.

But that still leaves us with a negative sense of “religion” at least in its institutional sense. We need to recover a more basic perspective there, too. As a universal human experience, religion is a fundamental aspect of our human existence. But it still continues to be difficult for us to hear the word in a positive sense in our culture.

One breakthrough is that the words “spirituality” and “religion” are often lumped together nowadays, to try to accommodate a positive sense of both. We live, indeed, in a time of great-- and difficult-- change!

3. Holding it all together. You will remember from Chapter 1 that the original meaning of *religio* is something like humanity’s common cultural

awareness of “how things hold together.”

“Religion” in that strong positive sense connects us with a bigger world than ourselves, and at the same time helps us to become that *true self* at the deepest levels of our personal reality that we feel called to be.

Our *effort* at self-realization-- personal transformation-- is the very essence of spirituality.

And it’s because our efforts at self-actualization are the very essence of spirituality that I have emphasized in this Legacy the four-fold or “mandalic” perspective about our personal conscious awareness.

For me, an especially important way to understand the cosmic imperative to “becoming our true self” is the Medicine Wheel imagery I described in Chapter 4. The basic idea there is that throughout our whole lives we need to keep moving around the “circle of power” which is available to us. Again, we’re not meant to remain caterpillars!

So we need to work hard at not letting ourselves get stuck at any one place on that “energy circle,” and to not neglect any of the four ways we have to become fully whole and consciously integrated persons.

There is help from contemporary science for this understanding. The famous neuroscientist Andrew Newberg, who I mentioned in Chapter 2, was interviewed about religion in the *Philadelphia Inquirer* on the weekend of Pope Francis’ visit to Philadelphia in September, 2015.

In that interview Newberg stresses that while languages or feelings are known to have specific locations in the brain where they are active, our brain does *not* have an area where religious or spiritual activities originate.

“If there is a spiritual part of ourselves,” says Newberg, “it is the whole brain.”

So to be whole we need to continually respond to all four of the cosmic imperatives expressed in the Medicine Wheel imagery!

We need to constantly make use of our White Buffalo detail-sensing power and our Golden Eagle thinking skills. We also need to continually activate our Green Mouse feeling capacities, *and most especially* to make good use our Black Bear abilities to see below the surface of things and to tune in to the evolutionary processes of the cosmos at work in us.

It’s by using our *whole brain* that we become whole. We have to use our whole mind and heart-- our genes, our psyche, our guts-- in order to become

that full, unique and creative person which the universe is inviting us and calling us to be. I think the term “effort” might be a one-word summary of what spirituality is all about.

4. Healing. At their best “religion and spirituality” have always been concerned with healing and wholeness. Even the very word “salvation”-- which is commonly used in the dualistic religious perspectives to mean being “saved” *from* “this world” (and from punishment in the next)-- comes originally from the word “salve” which means *healing*. The word “salve” is still used today in medicine as a term for healing ointments.

So in its original sense “salve-ation” means to be “healed” and “made whole.” And that-- healing and wholeness-- is what “religion and spirituality” are all about.

Spirituality has nothing to do with escaping from our life on Earth.

And religion, in its best sense of “what holds everything together,” helps us to see that we are empowered by the holy *spiritus* of the cosmic energy processes precisely in order that we may experience healing and growth into wholeness.

It’s only then, *by our personal creative efforts*, that we can contribute to making the good world better. So ultimately, healing ourselves in order to heal the Earth is what spirituality is all about.

5. It’s in our genes. From a long range perspective, it would seem that the *dualistic* forms of religion are only a blip on the radar screen of humanity’s cultural development. From the point of view of Anthropology, we can see that spirituality, like ritual, is in our genes.

All the world’s religions are essentially concerned with the same thing, our understanding and living out of the underlying purpose and meaning of our existence.

Just as it is in our genes to experience the “fight or flight” mechanism when faced with a dangerous situation, it’s also in our genes to try to understand the significance of our lives. We Earthlings are, as Julian Huxley says, “the universe become conscious of itself.” And we are simply too self-aware to be comfortable with the thought that our existence is meaningless.

I think the idea that life is not absurd may be the rock-bottom essence of

religion. And that spirituality is simply doing our best to live out in practice what we understand our significance to be.

6. Making the good world better. All of the world's religious traditions include the understanding that we Earthlings are responsible for others as well as ourselves. Buddhists, for one example, consider "compassion" a central aspect of their spirituality.

Common examples of compassion-in-action are feeding the hungry and sheltering the homeless. But in our day, we're coming to see that a compassionate spirituality also includes doing what we can to overcome the social and cultural conditions which cause people to become hungry and homeless in the first place. And that, of course, includes care for the environment.

Part of the individuation process, of becoming who and what we are called to be at the deepest level of our being, is our need to *recognize* the uniquely personal gifts, talents and skills which each of us has. It's only when we have some idea of what we have to offer that we can make our *unique* contribution to helping make the world better. Opportunities abound. But we need to know our gifts.

This is why an understanding of rites and stories is so important. It's also why C. G. Jung called our missing fourth function "*the religious function*" of our minds.

In the patriarchal context, the recognition of our personal gifts and our need to use them for the life of the world wasn't even considered an aspect of spirituality.

Today we can see much more clearly that it is precisely by doing what we can to make the world better that we become that unique person which, deep down, we are called to be.

I hope it's clear that what I just said is not a contradiction of what I said earlier about our need to recognize those uniquely personal gifts, talents and skills each of us has been given in order to make our contribution to helping make the world better.

It's a process. It works both ways. We *make our self* to build the Earth and we *build the Earth* in order to become even more deeply our truest self.

All this is radically different from the old patriarchal perspectives where what counted most was being a leader or warrior, one who was constantly entering into battles and contests to determine who was the best and who had authority and power over others. Competition was the essential skill required for most males. And of course in patriarchal culture women's skills hardly matter at all.

The fact that it's much less easy nowadays to write off women's concerns is a big step in the right direction out of the patriarchal perspective.

In American society we continue to have an ideal of competitive battles. From high school athletics and professional sports to entertainment and TV game shows, the only question that really counts is, "Who won?" And in political contests it's "Who's in power now?" Remember from Chapter 1 that the *authoritarian control of others* is what patriarchy is all about.

As the presidential elections of November 2016 so clearly demonstrated, these patriarchal ideals are not likely to be given up in American society anytime soon. Not until we have something better to pursue in fulfillment of our personal and social significance than being the winner of a contest. We *need* the New Cosmology!

7. The cosmic question. In the dynamic-evolutionary perspectives of the New Cosmology, we can recognize that we need to make use of our conscious and intentional awareness, talents and skills which we have inherited from our Paleolithic hunter-gatherer ancestors.

We need to be like our ancestors: always on the alert, always looking and watching, always being open to the archetypal energies offering themselves to us-- via images and stories-- for our direction and guidance. The problem is that in the kind of "culture of distraction" we live in, it takes great effort not to lose our awareness even that there is a cosmic process, let alone to be always keeping ourselves open to *what* that *spiritus* is calling us!

I know that at the start of this Chapter 6 "spirituality" didn't sound much like something practical. I hope you can see now that even though it may still seem odd to us, there's absolutely nothing more practical than being 'spiritual'!

I think the basic idea which combines all that we know of *kosmos* and of

anthropos is simply the fact that healing ourselves and healing the Earth go together. Those words may be a one-sentence summary of Parts I and II of my Legacy!

This combined perspective of *kosmos* and *anthropos* together helps us to distinguish easily between spirituality and religion. “Religion” at its best is seeing *how* everything fits together, and “spirituality” simply is what we *do* about it.

The well-known New England poet Mary Oliver, who was especially attuned to the 19th century American nature writers such as Walt Whitman and Henry David Thoreau, speaks for the whole universe in one of her poems when she asks each of us the most basic question we can be asked.

“What is it,” she says, “you plan to do with your one wild and precious life?”

Those challenging words by Mary Oliver seem to me the right way to end this final chapter of the *Anthropos* part of my Legacy.



PART III: THEOS



Chapter 7. *Eschaton*: Direction

Hello, Owen and Luke, Bitsy and Paige!

The most basic idea in the first two parts of my Legacy is easy to summarize. From modern science we have not only a new understanding of the physical universe, but also a new and better understanding of ourselves.

In terms of our place in the ongoing evolution of the universe, we see that each one of us, every unique human person, is a conscious and self-aware participant in that dynamic evolutionary process.

This joint perspective on the universe and humanity, of *Kosmos* and *Anthropos* together, immediately brings up some deep questions about the significance of it all.

Because we ourselves *are* the universe become conscious of itself, we simply can't help asking these kind of "ultimate" or "why" questions. It's in our genes to wonder "What's it all about?"

That's the topic of this *Theos* section of my Legacy. And it's a very big topic! Nothing less than an understanding of the meaning and purpose of the universe, including our personal and communal lives within it.

Contemporary society doesn't deal well with these issues. Indeed, it just doesn't deal with them at all! So you should expect that most of the concepts in Part III of this Legacy will be especially challenging.

I said in Chapter 1 that one version of *kosmos*, *anthropos* and *theos* is "science, humanity and religion." So in that sense, *religion* is the topic of Part III of my Legacy.

Of course I want to emphasize right away that I don't mean "religion" in the institutional sense. The topic here is *re-ligio*, "how *everything* fits together."

It's important to see that while our word *religion* probably comes from Neolithic times, the actual experience of religion, both personal and communal, is surely as old as the human mind and heart.

Anthropologists estimate that religious experience first appeared on Earth sometime before 50,000 years ago. We know that by that time our ancestors,

in terms of language and culture, were as fully human as we are today.

Religion is no less an emergent result of the cosmic process than was the discovery of fire and the use of tools many generations earlier, and as the global drive for racial and gender equality is in our own day.

It's important for us to recognize that religion is an aspect of cosmic evolution operating specifically at the level of human culture.

Remember also that cultural perspectives are different from that inborn kind of knowledge we share with other animal species.

Culture is "passed on learning." It is the accumulated observations and understandings of the world outside ourselves which we intentionally share with one another and pass on to our children and grandchildren.

My Legacy is itself an example of culture. The thoughts I'm sharing with you here, about *how* the findings of modern science and the roots of humanity's ancient religious traditions come together, were not "inborn." I have acquired them over the many years of my life and here I'm *passing them on* to you.

What I'm passing on to you is the "Big Picture." It is nothing less than what I hope is a coherent and unified overview of what we know, from science *and* religion, about the significance of the dynamic universe and the mystery of our existence in it. And that is, indeed, a *big* picture!

One more point about "religion." In a universe billions of years old it is likely that self-aware persons like ourselves have evolved in other solar systems and galaxies far beyond our own. Those self-reflective beings, however different they may be from us biologically, surely ask the same kinds of deep big questions we do.

So as strange as it may seem to many in contemporary society, *religion* in its most basic sense is probably as common throughout the universe as is life itself.

With regard to the Greek word *Theos*, my name for this Part III of the Legacy, I said back in Chapter 1 that because *theos* is usually translated as "god" or "God," I try not to use it. The word "God" has so many varied and often negative meanings today that it is simply not clear what people mean when they use it.

Remember that when I mentioned that I try not to use the word "God," I added "in a pinch, I usually say something like 'the mystery behind the

universe.”

Well, I’m now “in a pinch.” So bear with me here!

During my lifetime, I have found two especially good ways to talk about the “mystery behind the universe.”

One comes from the ancient Chinese Taoist text, *Tao Te Ching*, where “*Tao*” is the name used for the cosmic mystery. The *Tao Te Ching* begins by emphasizing that if we try to talk about the *Tao*, it’s really not the *Tao* that we are talking about. The best we can say is that *Tao* is “the no-thing from which every thing comes.” For that reason, *Tao* is also referred to as the “mother of all things.”

“*Ching*” just means “book,” but the word “*Te*” in the title means “energy.” So *Te* is the power and energy of the *Tao* as it manifests itself in the workings of the world. And that, you’ll remember from Chapter 6, is exactly what the old Latin word *spiritus* means!

One other especially good way I’ve found of talking about the mystery of the universe comes from a very different source, a highly respected 20th-century Catholic theologian, the German Jesuit Karl Rahner.

Karl Rahner says it’s important not to think that the word “God” refers to an object. He emphasizes that “It’s not like a pair of shoes under our bed.” It’s not a thing in any sense but the source of everything.

Rahner describes the mystery as “the context and precondition of our lives.” His words are obviously different from those of the Taoists, but as you can see his understanding isn’t. Although Rahner and the ancient Taoists lived 3,000 years apart, they had the very same perspective. The mystery behind the universe is a not a thing but the context, precondition and source of every thing.

Rahner often uses the phrase the “Holy Mystery.” Some Native Americans use a similar term, *Wakan*, which is usually translated as “Great Mystery.” It literally means “amazing” or “wonderful.”

So it seems that in English “mystery” is probably the best word we have to name the ultimate basis and source of everything.

But even that’s a problem. In everyday language, “mystery” usually means a puzzle, something we have to try to figure out, like a math problem or the kind of detective story we call a “murder mystery.”

But that’s not the primary meaning of “mystery.” In its original sense,

a *mystery* is something that leaves us speechless. The Greek word *mystice* means “closed-mouthed.”

So a mystery is something we can never get to the bottom of. It’s an experience we can never totally figure out. In fact, the more we think about it the *more* meaningful it becomes!

Remember from Chapter 3 Eugene d’Aquili’s understanding that we have a “cosmic imperative” to try to make sense of things. We know from our personal experience that some things are in fact open to ever deeper and deeper understanding. *That’s* the kind of “mystery” I mean when I say, “the mystery behind the universe.” So it looks like the Greek word *Theos* is as good a name as any for this final part of my Legacy.

But what about those strange Greek words, *Eschaton* and *Ekklesia*, which I’ve used for Chapters 7 and 8?

I’ve used them simply because once again I don’t have good English words for the ideas I want to share with you.

The basic topic in both chapters 7 and 8 is the fundamental cosmic and human perspectives about the mystery of our existence found in the religious traditions of the Western world. While most of us are familiar to some extent with the religions of the West (Judaism, Christianity and Islam), it is also important to be aware that they have roots in even earlier traditions such as Persian Zoroastrianism.

Those roots first appeared in the Near East or Middle East (Mesopotamia) about four thousand years ago. For the most part, they remain unknown in our culture today.

Of course it won’t surprise you to hear me say that the reason those roots “remain unknown today” is because the views found there only make sense in terms of the “missing fourth function” of our minds.

As I hope you will see, those ancient views at the roots of our contemporary Western traditions make exceptionally *good sense* when understood in terms of the evolutionary perspectives I’ve described in Parts I and II, the *Kosmos* and *Anthropos* sections of this Legacy.

The one big idea at the base of all the Western religious traditions is that the world is going somewhere. All reality is in a process of growth and development. That’s what the Greek word “*eschaton*” means.

Of course in the static patriarchal perspective, the idea that the world is going anywhere is meaningless. But many modern thinkers, both scientific and religious, have helped us to move out of that static prison. And, believe it or not, there's even a small migratory bird I'll describe later who offers us some encouragement in our efforts!

So in this Chapter 7 on *Eschaton* I'll share some thoughts with you about what seems to be the direction of the cosmic process.

And in Chapter 8, *Ekklesia*, I'll describe that "community" of those persons who down through the ages have maintained and celebrated their understanding that the universe is in fact "going somewhere." The Greek word *Ekklesia* just means "a group of people with a common intention and purpose."

These are deep and challenging ideas. So please take your time thinking about them. My hope is that you will find them *very* rewarding!

1. Significance. In thinking about a *goal* or *purpose* to the universe and the meaning of our personal existence in it, it's important to recognize first of all that the significance of human existence is one with that of the whole cosmos. Because we *are* the universe "become conscious of itself," we have meaning only if the universe does.

So this is a big topic. And of all the chapters in my Legacy, this one is the most difficult to write about clearly. The problem is that those early cultural perspectives which emerged in ancient Persia about a direction in which the world is going have to a great extent been lost in modern Western civilization. And there's no way to talk about the direction of a process if there's no recognition that there is a process!

As I've said, *eschaton* is a Greek word for a developing process. So "eschatology" is about the purpose or 'end' of the universe. It's the biggest possible "Big Picture" we can have of reality.

There's also another Greek word for this same idea, *telos*. The word "teleology" is used in science as a way of talking about the direction in which a part of a living thing can develop. It's used, for example, to describe how the skin cells of an embryo can develop in different way, into scales, or feathers or hair.

Generally, the idea of purpose (*telos* or *eschaton*) has been absent from scientific thought. Remember from Chapter 4 that early modern science

dropped Aristotle's "final cause" from its thinking!

The situation is very different in a religious context. There, ideas about a cosmic *eschaton* have been around for thousands of years.

Those views became greatly distorted when they were expressed in the static and dualistic perspectives of patriarchy. So trying to talk about *eschatology* in any clear and positive way here is difficult. Again, *please be patient!*

2. Deacon & Haught. Since the middle of the 1800s science has provided us with an increasingly clear picture of the cosmic process. But even evolutionary scientists themselves have been hesitant to think about the idea that the process may have a *telos* or *eschaton*.

So once again Terrence Deacon's words "Look to the energy processes" are especially important. If we don't have a dynamic view, we remain stuck in the static worldview of the past where there is no process-- and so no purpose-- to the universe or ourselves. Deacon's focus on the cosmic emergence of life and mind is exactly right.

There's also another important contemporary thinker who specifically focuses on the idea of a direction to the cosmic process, John F. Haught of Georgetown University.

In a talk at a conference at Yale University in November 2014 Haught stressed the importance of including "mind" (that's his academic way to talk about ourselves) as part of the evolutionary process. He says we humans are not just a *result* of that cosmic process. We also need to include ourselves in any understanding of the *significance* of the process.

So while Terrence Deacon says, "Look to the energy processes to understand the emergence of mind," John Haught says, "And look to the emergence of mind to understand the cosmic *eschaton*."

Haught's point is that we can't understand the purpose of the universe if we don't take our own human self-awareness into account. And this, again, is why I emphasized in chapters 3 and 4, and have frequently mentioned since, that the missing fourth function of our four-fold minds has been absent from Western culture and society for many centuries. *We need that "missing fourth" if we are to make sense of ourselves and the universe!*

It may seem strange there are contemporary thinkers who leave humans out of the cosmic picture. The perspective of these academic scholars, called “reductionists” or “materialists,” simply does not include the human mind in their understanding of the natural world.

But even *they* value their own minds, as Haught (somewhat sharply) notes. He says that even the most strongly materialistic thinkers “have no shortage of trust in the stellar integrity of their own mental performances.”

Haught’s point is clear enough. Science has now demonstrated that mind “is stitched so seamlessly into the fundamental physical features of the Big Bang universe that, whatever else it may be, the cosmic journey is at the very least a mind-making project.” Haught adds that “Overlooking the extraordinary properties of mind while trying to understand the universe is ‘shortsighted.’”

It’s also clear just *why* the presence of personal self-awareness in the cosmic process is a major problem for materialist and reductionist thinkers. They prefer to leave humans out of the picture because making sense of the story of the emergence of “mind” requires in some sense a deep or “religious” perspective.

And “religion” over the last few centuries, specifically in its dualistic forms, with its pathological emphasis on sin and guilt, has made itself highly unattractive to a great many thoughtful people. Clearly, religion, no less than science, has some “unfinished business”!

3. The unfinished business of religion. We obviously need not only a better understanding of science but also a better understanding of religion as it has come to be understood in the Western world.

And that, of course, is a main part of what this Legacy is all about. As I said at the start, I’m attempting to describe for you “how the findings of modern Western science and the ancient roots of Western religion come together.”

Here’s what Haught says about resolving this dilemma of our need for better science *and* better religion: “I propose that its resolution requires a horizon-shift to a whole new metaphysical setting, one that is distinct from religious dualism on the one hand and from materialist naturalism on the other.”

By his term “horizon-shift” he’s pointing out that we need a new cultural

context, one where the science is not materialistic or reductionist, and the religion is not static or dualistic. The main idea of the “horizon-shift” is that we “have to consider that the production of mind is what the cosmic story is really all about.”

Haught is saying that *persons* have a central place in the evolution of the universe. *We need to take ourselves into account* if we are to understand the ultimate purpose of the world. We simply can't leave out our own personal experience of being part of it if we are to understand the significance of the cosmic process.

And “taking ourselves” into account is no small thing! At this very moment on our planet there are more than seven *billion* of us!

I said in Chapter 1, and have mentioned frequently since, that the word “religion” originally means something like “what binds everything together.” So it's we *Earthlings*, all of us together, including our ancestors and descendants, who are “the tie that binds.”

Taking all that into account is the unfinished business of religion.

4. Creative cosmic thinkers. It is frequently recognized that creative people, artists, poets, writers, and thinkers in general, are often far ahead of the general population with regard to the need for new perspectives. I have a few examples to offer you specifically with regard to our need for a horizon-shift.

In the middle of the 1800s, in then-distant Russia, a new social and cultural perspective emerged for understanding the place of human beings in the cosmic process. It's called “Cosmism.”

Cosmism began with a Russian visionary named Nikolai Fyodorov. He lived until the early years of the 20th century. Cosmism included many other thinkers, such as Konstantin Tsiolkovsky, who was among the pioneers of theoretical space exploration, and Vladimir Vernadsky, who promoted the concept of the *noosphere*. That's the idea that the Earth is surrounded by a layer of “nous”, conscious thought. Today we call it the World Wide Web.

Unfortunately, as a social and cultural movement, “Cosmism” remains to this day almost totally unknown in our country.

Another example from around the middle of the 1800s, but closer to

home, are those American writers such as Walt Whitman and Herman Melville who also were expressing the need for a new cosmology.

Walt Whitman as you know lived in Camden and is buried there. I was born in Camden. So was Owen's and Luke's mother, and Bitsy's and Paige's father.

Walt Whitman's grave is just about a half-mile down the road from the hospital where Rosemary and Michael were born. Gran and I stopped there with each of them on our way home from the hospital, so that the first significant outing for both of them was a visit to Walt Whitman's grave.

Whitman's perspective is especially important. Like the Russian Cosmists, Walt Whitman emphasized that each human being is called to take an active role in the evolution of the universe. And especially important for our day, he stressed that no one is to be excluded for any reason, such as gender, race, place of origin or sexual orientation. He called his cosmic perspective "Spiritual Democracy."

Whitman's understanding of the need for a horizon-shift was originally inspired to a great extent by the work of the early 1800s geologist and explorer of South America, Alexander von Humboldt. I mentioned him in the previous chapter. Humboldt recorded his findings and notes in a five-volume text called *Kosmos, A Sketch of the Physical Description of the Universe*, originally published in 1851.

When I was in the Andes Mountains in Ecuador helping with rainforest research in the early 1990s, I had lunch one day in an ancient Spanish *ranchero* where Humboldt had stayed overnight almost two centuries earlier. It's a great delight to have such links, however small, with the history of science and evolution!

There's one more especially important example of a uniquely creative person on the growing edge of humanity's cultural development.

Early in the 20th century, the need for a new cosmology was expressed in an explicitly scientific context by the French Jesuit priest and scientist Pierre Teilhard de Chardin. His wording for this new understanding was that we need a "new physics," a new perspective, that is, on *physis*, the Greek word for natural world.

It's now about a century since Teilhard first observed that the

phenomenon of “thought” (his word for “mind” or human awareness) is a cosmic development, rather than something that we need to think has been superimposed on nature from outside it.

That, of course, is what was done in the pre-evolutionary static worldview. Teilhard lamented the fact, as Haught says, that scientists had left mental phenomena (“thought” or “mind”) off of their map of nature, that “philosophers relegated consciousness to the sphere of epiphenomena.”

The word “epiphenomena” refers to accidental and non-essential aspects of any process. So the static, materialist, reductionist view that humans really aren’t important for an understanding of cosmic evolution sounds, as Haught says, “like an almost willful refusal to see what should be obvious to everyone.”

The main point here is that modern science itself requires us to have a non-materialist and non-reductionist view of ourselves as part of the physical cosmos. These many creative thinkers, from von Humboldt and Walt Whitman to Fyodorov and Teilhard are telling us that *we do, indeed, need a horizon-shift!*

5. “Missing fourth” again. Once again I need to mention the “missing fourth function” of our consciousness. It so greatly helps us to make sense of the enormous change, the “horizon-shift,” we need.

Remember that while our Sensing ability is oriented to the perception of matter and the present, it is our super-sensing Intuition capacity that is oriented to energy and the future. In terms of seeing a possible direction in which the cosmic process is moving, we might re-word Terrence Deacon’s phrase a bit. Instead of just “Look to the energy processes,” we can say “Look to *the future* of the energy processes.”

Haught’s wording here is that in order to make sense of a cosmic *eschaton* we need a “future-ist metaphysics.” He calls this future-oriented view an “anticipatory vision.”

A recent (2017) book by UCLA neuroscientist Dean Buonomano, *Your Brain is a Time Machine*, lends good scientific support for this needed horizon-shift.

Buonomano notes that the brain remembers the past and endows us with the ability to mentally project ourselves forward in time precisely in order to

predict and prepare for the future. He puts it tentatively, as academic people tend to do, but he says “If one were to unwisely attempt to summarize the function of the brain in three words, those words might be *anticipate the future*.”

Anticipating the future is built right into us by the cosmic process!

John Haught spells it out even more. He says that in anticipating the future we need to see the cosmic process as a drama or narrative. In order to make sense of it, in terms of where it’s going and what we humans can hope for as a significant part of it, we need to see that the evolution of the universe is a *story*.

Remember from Chapter 5 how central the idea of image and story is for understanding the transformative value of ritual!

Haught includes a quotation from one of Teilhard’s major writings, *Hymn of the Universe*. I think it sums up well this future-oriented “story” perspective. Teilhard’s words provides a strong image for looking at the direction of the evolutionary process:

Like a river which, as you trace it back to its source, gradually diminishes till in the end it is lost altogether in the mud from which it springs, so existence becomes attenuated and finally vanishes away when we try to divide it up more and more minutely in space or-- what comes to the same-- to drive it further and further back in time. The grandeur of the river is revealed not at its source but at its estuary.

We have our own close-by example of the grandeur of the river being revealed “not at its source but at its estuary”!

The Delaware River is about a mile wide between Camden and Philadelphia, but it begins in springs and small streams in the Catskill Mountains of New York State. It gradually widens as it flows through the Delaware Water Gap north of here and widens even more as it makes its way down between New Jersey and Pennsylvania. It flows past the site where Washington crossed the Delaware just north of Trenton on Christmas Night, 1777.

And it continues to widen as it flows past Petty’s Island (which is officially part of Pennsauken), goes on to Wilmington, and eventually opens up into its estuary we know as Delaware Bay.

Delaware Bay is the home of the famous living fossils, horseshoe crabs, which are a source of food for the even more-famous shore birds known as red knots. The red knots are those birds who each year make a round trip migration of nearly 20,000 miles between South America and the Arctic. They weigh only a few ounces and depend on a crucial stop along the Delaware Bay, where they fatten up on the eggs of the horseshoe crabs.

One of those little birds, nicknamed “Moonbird,” has become especially famous. Scientists have discovered that Moonbird has made that round trip from the bottom to the top of the Earth for more than twenty-two years. Officially tagged #B95, Moonbird has traveled as far as to the moon and back. As far as I know, Moonbird was last seen in New Jersey in 2015, and was spotted in Argentina in January 2016.

There’s a wonderful book about this story, *Moonbird: A Year on the Wind with the Great Survivor B95*. The grandeur of the Delaware River is indeed revealed at its estuary, which has been welcoming Moonbird’s red knot relatives for countless centuries!

In the same way the grandeur of the whole cosmic process is revealed, as Haught says, “not at its starting point but at its fullest development.” That’s where we must look if we are to see that each of us, and the entire universe with us, has a future.

I find it absolutely delightful that a little six-ounce bird, who visited Cape May many times, and during its life time flew the equivalent of a trip to the moon and back, helps us in our efforts to understand these eschatological ideas of “grandeur” and “full development.”

6. The Anticipatory Vision. Haught’s anticipatory worldview is a cosmic perspective which, like “looking at the grandeur of a river from the point of view of the estuary,” looks to the *future* of the energy processes. The details are important.

The anticipatory vision has three parts. It sees, first, that the evolutionary cosmos has a *direction*. It also sees that *where* the universe is going rests on the Mystery behind the universe. And it sees that we can’t understand this cosmic perspective without a sense of *trust* in the universe.

Once again it comes down to personal experience. If we can trust that the universe is meaningful, then we can trust that each of us personally, and all

the world with us, has a future.

Although his academic language is abstract, it's worth looking carefully at Haught's own description of this anticipatory vision.

The anticipatory vision
locates the enduring foundation of the universe
up ahead,
in the infinite resourcefulness
of a God
whose reality cannot be apprehended
apart from our assuming the posture of hope.

It's important to see that Haught's words here mean something very different from the way they might be understood in the old static and pre-scientific worldview. He is *not* saying that because there's a God, we can hope to have a future.

He is saying that without some preliminary trust in the meaningfulness of our own existence-- without a trust in the universe-- we can't understand the mystery behind the universe.

It is especially important here that we not equate the phrase "the mystery behind the universe" with the word "God" as it's usually used in our patriarchal culture. As the Jesuit paleontologist Teilhard de Chardin I mentioned above says, "That God is too small."

Too small, indeed! In Haught's words, "We need a vision of reality wide enough not only to embrace honestly the discoveries of the natural sciences but also open enough to find a hospitable home for the anticipative thrust of our own critical intelligence."

This is pretty sophisticated stuff! But the basic idea is clear enough.

We have to trust our own personal experience that we really belong to the universe, and that each of us, with our "one wild and precious life," has a unique contribution to make to its development.

I think that passing on these wonderful words to you may be the very essence of my task in this Legacy.

7. Abraham. It especially warms my heart that Haught's "anticipatory vision" is central to all three of the West's major religions. He calls it the "Abrahamic tradition," because the three of them, Hebrew, Christian and Islamic, all trace themselves back to the same person, the one who each of those traditions calls "our Father Abraham."

In Haught's words, what characterizes the Abrahamic traditions is that they see that "ultimate reality comes to meet the world from out of the future." These three branches of one great Western religious tradition all agree that, at this stage in the Earth's evolution and humanity's cultural development, "it's simply not a reasonable judgment to opt for absurdity."

In the final chapter of my Legacy, I'll share some thoughts with you about the origins of the Abrahamic tradition, and about the community of those prophetic and creative persons who, down through the ages, have preserved and celebrated this vision of trust in the future.

I know this chapter has not been easy, so once again, thank you for staying with me! *We're almost done.*



Chapter 8 *Ekklesia*: Community

Hello, Owen and Luke, Bitsy and Paige!

The thoughts I shared with you in *Eschaton*, Chapter 7, about the *direction* of the cosmic process are unconventional views in our still-patriarchal society. The old static view of the cosmos and the dualistic view of ourselves persists in American culture.

But the *eschatological* worldview at the roots of the Abrahamic traditions lets us move away from those patriarchal perspectives.

In this final chapter of the Legacy, I want to share with you some of my thoughts about that community of persons who down through the ages have preserved and celebrated this profound, pre-scientific but evolutionary view of the world and of our place in it.

It's that community of persons which is what I mean by *Ekklesia*. And our personal experience is the key to making sense of this perspective. As John Haught points out so well, we need to start with the mystery of our own existence.

Remember what the word "mystery" means. It refers essentially to those kinds of experiences we feel we can "never get to the bottom of." Remember too, as I noted in the previous chapter, that "mystery" comes from an old Greek term, *mystice*, which means "closed-mouth" or "speechless." When we try to name in English this kind of deep experience, we usually find ourselves saying things like "I was dumb-founded" or "I was at a loss for words."

We use those kinds of phrases to refer to anything which strongly grabs our attention, to whatever makes us feel astonished and amazed. A beautiful sunset, for example, or the first snowfall of winter. For many, it might be standing at the edge of the ocean. And it can be as simple as seeing morning glories blooming on a fence.

I think maybe the best example of 'mystice' is when we first see a newborn baby. When each of you, *Owen and Luke, Bitsy and Paige*, was born, I visited you in the hospital on the very day of your birth. On those very special occasions, when I was in the presence of a brand new human person-- you!-- it really did leave me "speechless."

In the broadest sense, “mystery” refers to whatever we find wondrous. And as the famous medieval philosopher and saint Thomas Aquinas who I mentioned in the Introduction says: *Omnia exeunt in mysterium*. “In the end, all things fade into mystery.”

By “*omnia*” he means absolutely *everything*: the mystery of ourselves (*anthropos*), the mystery of the world around us (*cosmos*), and the mystery behind the world (*theos*). Everything, all together!

And without doubt, the most astonishing mystery of all is simply the fact that we *exist*. We can’t really ever “get to the bottom of it.”

We not only experience ourselves as self-aware beings in a vast physical universe of time, space, matter and energy. We’re also conscious of ourselves as continually being transformed from moment-to-moment, of *growing* by way of images and stories, into something more than we already are. Of being, as Henry David Thoreau says in his Legacy, an “ever new self.”

Our rationalist culture *represses* such experiences. But sensitive persons, those especially with a strong “inner” and “creative” bent, like Thoreau, Walt Whitman and Mary Oliver, help us to describe them.

The Latin phrase for these awesome and overwhelming feelings is *mysterium tremendum et fascinans*. They’re usually called “experiences of the sacred or holy.”

One of the main thoughts I want to share with you in this chapter on *Ekklesia* is that the perspectives of modern evolutionary science *greatly help us* to understand and value such “sacred” experiences of the awesome mystery of our selves.

Down through the ages, these kinds of profound experiences by which we enter into the meaning and significance of our lives have been treasured and celebrated by many creative persons among us. I think a good name for such persons is the “eschatological community.”

Thanks to contemporary science, today we can see even more clearly what that age-old “eschatological community” has always seen: that the world is a dynamic and awesome *process*, that the process is still going on at this very moment, and that we’re part of it.

When we understand modern science’s evolutionary worldview *not only* in terms of stars, planets and living things but *also* in terms of our own

personal awareness, we can then experience ourselves, along with the cosmos, as being from moment to moment made ever-new.

One name for the fact that we experience our personal growth and development as happening from instant to instant goes back to the medieval Sufi thinker Ibn Arabi. What he called it, in English, would be something like “recurrent creation.”

Today psychologists use words like “recurrent self-actualization” and “ongoing self-realization” to describe this experience of being an “ever new self.”

My main idea here is that in our day, as never before, we can see from personal experience that the evolutionary process is indeed, as John Haught says, a *story*. The emergent events of the cosmic process and the emergent events of our own lives within it *add up*!

And we can see clearly that our own story isn’t finished. If we want to grasp the meaning and purpose of “our one wild and precious life,” we need to think in terms of what’s yet to come.

Even though we obviously cannot know much about the details, we can trust, simply because we can see that the universe has a direction, that we do indeed have a future. The cosmic story is still going on.

There’s no doubt that in our present social context these are odd views. Purely rationalist persons just don’t know what to make of them. But this profound understanding of the meaning and purpose of our existence is what we Earthlings have come up with over several thousand years in our efforts to understand the cosmic *eschaton*.

And it’s that “community” or “company” of Earthlings who have preserved and promoted for us this profound perspective of trust in the universe which is what I mean by “the *ekklesia*.”

The word “*ekklesia*” comes from ancient Greek civic life. There it referred to groups of citizens who joined together to work on projects for the common good, what today we call “public works.”

Obvious examples of a community of persons involved in “public works”

are the members of a volunteer fire company.

But there are many others: from Habitat for Humanity and Doctors Without Borders to people in big cities who work on behalf of the homeless, to those who gather to protest racial or gender inequality and ignorance of climate change. Any group which comes together on behalf of the common good is an *ekklesia*.

In earlier times, in various cultures, such persons were sometimes called “shamans” or “mages” or “doctors” or “prophets.” By whatever name, the focus of their concern has always been the same: the healing process, with the goal of wholeness of life and health for all.

In the first centuries of the Christian era, the word *ekklesia* took on the meaning of the gathering of all those persons who throughout history have held to the “eschatological” perspectives about the purpose and significance of our existence. The early Greek-speaking Christians saw Jesus as exemplifying it and they thought of themselves as an *ekklesia*.

Today, thanks to the new cosmology, we are able to see more clearly than ever that the world-wide community of doctors, shamans, artists, teachers and prophets-- indeed, of all those persons who are concerned with *healing and wholeness*, with *transformation* in the broadest sense-- constitutes a planetary *ekklesia*.

In the context of the largest perspective available to us, we are able to recognize more explicitly than ever that this global community constitutes the evolutionary growing-edge of humanity. It is the worldwide community of all those who, in John Haught’s words, see that “ultimate reality comes to meet the world from out of the future.”

One more basic idea. The Scottish and German version of the Greek word *ekklesia* is “kirk,” which is where we get our English word “church.” (If that seems odd, just say the word “church” with the “ch”s sounding like “k”s.)

In our present cultural context, “church” is as much a problem as are words like “God” and “ritual.” The original meaning of “kirk” got lost, and today the word “church” refers only to buildings or to the administrative authorities of the various religious denominations.

In that sense, the institutional churches have fallen on hard times. They

remain stuck in the old static worldview. More and more people today are simply no longer interested in them.

It's important to understand that in my Legacy I mean *ekklesia* in its original, non-static, non-dualistic sense. I mean it just as it was used in the early days of the West's Judeo-Christian tradition.

I know that this perspective isn't easy to grasp. In the static context of patriarchal culture, human beings came to be thought of as souls trapped in bodies needing to escape from the world with the help of the institutional churches. And eventually, that dualistic view came to be considered the essence of religious belief.

It's not, of course. But because of patriarchy's dualistic disdain for the world, *religion* and *spirituality* lost their sense of cosmic wonder, and people's hope for the future was replaced by the fear of future punishment. Belonging to a "church" became a means for avoiding that punishment.

Similarly, the phrase "end of the world" came to be understood not as a cosmic *eschaton*, a direction in which the world is moving, but as the "end of the world" in the sense of its destruction.

Nowadays, "the end of the world" is known as "dystopia." And with the enormous number of current "dystopic" novels, films, and TV shows, we can see what a powerful influence the old static worldview of patriarchy continues to have on our society.

In the first half of the 20th century, however, many religious thinkers, scholars and theologians began working to recover the original understanding of *eschaton* and *ekklesia*. And somehow, from an early age, your grandfather was attuned to that effort!

In our day, the original meaning of *ekklesia* ("church," "kirk") is gradually being recovered, although it is happening more at the fringes of, rather than within, the old institutional churches.

But it really is happening! In the 21st century, we are slowly recovering a sense of wonder and trust in the astonishing universe, and a gratefulness for our own personal existence in it.

That in-process-of-being-recovered *evolutionary* view of the *ekklesia* is what I am sharing with you in this final chapter.

This has been a very long introduction to Chapter 8, so before going on,

you might want to take a break. Strong stuff follows, and you will need lots of energy and good will to take it all in. *Happy thinking!*

1. The roots of the eschatological vision. I noted in the previous chapter that the roots of the Western religious traditions go back to ancient Persia. That's roughly what we know today as Iran and Iraq.

As far as I'm aware, the Zoroastrians there were the earliest people to record their understanding of the world as having an *end* and *purpose*.

In modern times, Zoroastrians are usually dismissed as primitive "fire worshippers." So it's important to note that theirs was not a static worldview. It was centered on cosmic *transformation*.

If that dynamic perspective seems strange to us today, it's simply because patriarchal culture and dualistic religion still get in our way.

The Zoroastrians had a very positive understanding of what I've called the "missing fourth" function of consciousness. They even had a name for it. They called it *xvarnah*, which apparently means something like "seeing reality in the light of glory."

Those old Zoroastrians valued the world. They saw that the world has a direction, that humanity is part of it, and that we have a significant role to play as co-creative agents in it. One of their basic prayers was

*May we be among those
who bring about
the transfiguration of the earth.*

The main insights of the Zoroastrian tradition have been expressed well by two Princeton University scholars, Patricia Crone and Peter Brown. Here's a brief summary of their words:

Zoroastrianism as practiced preserved one basic principle: the world was good. It was good because it was suffused with an energy of light that was a direct continuation of the energy of God himself. To Zoroastrians, the light of the sun and of the holy fires that they worshipped "was not a symbol— it was a sample."

Don't pass too quickly over the words, "not a symbol, but a sample."

For the Zoroastrians, the reality we experience on an everyday level, even something as basic as the light of the sun, is nothing less than the divine Mystery manifesting itself to us.

Religious scholars refer to the "Mystery making itself known to us" as a *theophany*; it's an unfamiliar word but it means something like a "showing forth" of the mystery of the *Tao* or *Theos*.

Those old Zoroastrians recognized that the world and each human being is *theophanic*. They saw every person as a unique-in-all-the-world manifestation of the Great Mystery. And that it is *xvarnah*-- the "light of glory," the divine energy in us-- which makes each of us that utterly *unique* person which we are.

The Zoroastrians had a non-static and non-patriarchal awareness of cosmic energy. They saw the world as an ever-greater evolutionary development of the light of glory in all things. They saw that the very *purpose* or *end* of the universe, the *eschaton*, is the on-going manifestation of the mystery behind the universe.

2. Something new happened. This dynamic worldview is at the root of the Western religions. It was passed on by way of the Hebrews to the Christian and Islamic traditions. As I noted in the previous chapter, the evolutionary worldview is the basic perspective of all those who trace themselves back to that person they call "our Father Abraham."

The 20th century scholar of Islam, Henry Corbin, refers to this common perspective of Jews, Christians and followers of Islam as the *Harmonia Abrahamica*. It is still a living tradition, not a minority view.

Today, the "children of Abraham" make up about half of the population of planet Earth.

The fact that Abraham came from Ur of the Chaldees-- that his hometown was "the city of the Chaldeans" in ancient Mesopotamia-- is still remembered each year at the Passover Seder.

And the dynamic Passover event, the Exodus story of the "Great escape from Egypt," is considered by historians to be one of the earliest expressions of the idea of evolution in the West. As a result of the Exodus story, the Hebrews saw that "something *new* happened."

So here is one of the most important ideas I want to share with you. The unique eschatological worldview of cosmic and personal transformation, which found expression with the Zoroastrians and was passed on by way of the Hebrews, is at the roots of *both* our Western religious traditions *and* the evolutionary perspectives of science.

Who would have guessed!

Over time, these dynamic views got lost. More correctly, as one of my favorite religious thinkers, Bruno Barnhart, a monk from Big Sur, California, liked to express it, the dynamic view became “eclipsed.”

But now, with the new, dynamic and non-dualistic cosmology we have from modern science, the perspectives of the ancient Persian and biblical traditions are being recovered.

For the first time in many centuries, this recovery allows us a much better understanding of the meaning of words like “God,” “religion,” and “church” in a dynamic evolutionary context.

3. The theophanic worldview. There is a Zoroastrian text, several thousand years old, which describes that ongoing process of the emergence of light from darkness. (In what follows, it helps to think of the word “they” as referring to the energies of the evolving cosmos.)

*And they will make a new world, freed from old age and death,
from decomposition and corruption, eternally living, eternally
growing, possessing power at will, when the dead will rise again,
when immortality will come to the living, and when the world will
renew itself as desired.*

This spiritual worldview of a dynamic *eschaton* is found in the Hebrew Bible, the Christian New Testament, and the Islamic Koran.

It was also spelled out well by the early Church Fathers, it is found in later Eastern Church thinkers such as Symeon the New Theologian and Saint Gregory Palamas, and it is still preserved today in the liturgical practices of the Orthodox and Oriental Christian churches.

The same dynamic worldview also persists in the Islamic Sufi tradition in the work of writers such as Suhrawardi, Ibn Arabi and the poet Rumi. And it's found in Western spiritual writers outside the conventional church perspectives, such as the 14th-century saint, Julian of Norwich, and the 17th-century Swedish thinker, Emanuel Swedenborg.

This same evolutionary perspective also is found in many 20th-century religious writers such as the Orthodox theologian Alexander Schmemmann, and thinkers I mentioned earlier such the French Islamic scholar Henry Corbin, the Jesuit paleontologist Teilhard de Chardin, and the German Catholic theologian Karl Rahner.

In Rahner's words, "The holy Mystery is always and everywhere giving itself to us, always and everywhere making itself known to us."

And as Henry Corbin emphasizes, the most basic manifestation of the Mystery is nothing less than our own personal self-actualization.

A one-sentence summary of this ancient theophanic and eschatological vision at the root of Western religion's understanding of the significance of the world would look something like this: *Cosmic evolution is an ever-increasing manifestation of the light of glory.*

4. Ekklesia and Eschaton. Over the centuries, the spokespersons for the children of Abraham have used many different words and phrases to describe this theophanic understanding of the world's meaning and purpose.

In New Testament times, the Apostle Paul refers to the *eschaton* as the "fullness of God in everything." In modern times, Bruno Barnhart, the religious thinker I mentioned above, describes it as the "in-gathering of all, beyond the passing away of things."

One traditional Greek word for it is *pleroma*, which means something like "absolute fullness." Another is *parousia*, which means "arrival" or "the presence" of the *eschaton*. There are also several forms of a very big Greek word, *anakephalaiosis*, which is usually translated as "recapitulation." It means "the summing up, or gathering together of everything, into one."

Teilhard de Chardin said all this quite simply. He said "Nothing good will be lost."

It's difficult to express these thoughts easily in modern words and concepts, but the *main* idea is clear enough. The dynamic interconnectedness of all reality is the *ongoing and all-embracing unity-in-diversity* of all things, *Kosmos, Anthropos* and *Theos* together.

5. A sacred sign. An especially important point I want to share with you is that the early Christians saw their communal gatherings as an explicit expression of this cosmic vision. For them, the very essence of the *ekklesia* is to be a sign, a theophanic manifestation of the *eschatological* in-gathering of all things.

Karl Rahner describes this understanding of *ekklesia* with the Latin words *sacramentum mundi*, a “sign of the world’s meaning.”

And the 20th century’s most profound theologian, the Spanish-Indian Raimundo Panikkar, noted that those words sound even better in Greek: *mysterion tou kosmou*. “The mystery of the cosmos.”

In our day, all of the Earth’s people are beginning to see that the various cultures of the world really do constitute one global society. We are coming to recognize ourselves as part of a single, inter-dependent and ecologically-focused planetary community. This allows us a much deeper understanding of “church” than in previous times.

The essence of the *ekklesia* stands out in the context of the new cosmology. “Church” is nothing less than an all-inclusive *sign* of the eschatological meaning of the entire cosmic process. The *ekklesia* is a *manifestation of the world’s significance*.

It’s important to see that this understanding of *ekklesia* combines the evolutionary ideas of modern science and the Big Picture insights which began in ancient Mesopotamia. And what a *difference* it makes!

Cosmic evolution is what the *ekklesia* is all about. As an all-inclusive reality, the “kirk” excludes nothing. As a sacred sign, *sacramentum of the world’s significance*, “church” includes every thing and every one.

6. Ritual and the *Ekklesia*. For me, one of the most wonderful aspects of this eschatological vision is that it is traditionally expressed not in concepts, as I’ve been trying to do here, but in actions. The story is acted out. We experience the *eschaton* via ritual.

Because of my life-long interest in ritual, I especially delight in the fact that *ritual* is the ordinary way in which we humans are empowered to participate of the evolution of the cosmos. It is also the fundamental way in which we experience the meaning of the whole cosmic process.

As “Children of Abraham,” the early Christians inherited the religious

perspectives of the ancient Near East about the world as a dynamic reality. They saw the *eschaton* as an ultimate in-gathering of all humanity into an all-inclusive cosmic community. And they saw the story of Jesus in that dynamic context as exemplary for all of us.

The early Christian understanding that “Jesus’ story is also our story” got greatly distorted when it was expressed later in patriarchal ideas and in terms of classic Greek philosophy. The same thing happened to the ritual expression of the *ekklesia*. So as I see it, in our day the recovery of an authentic ritual expression of the *ekklesia* is a major aspect of the unfinished business of religion.

The neuroscientist Andrew Newberg, in a discussion of topics which he described as “meditation, prayer, rituals, group rituals, going to Mass, church, synagogue, whatever,” was asked, “Why do such things have such a powerful impact on us?”

To my delight, his answer is that “the rituals of a football game are basically identical to religious rituals.” Ultimately, what ritual is all about is “a feeling of connectedness and community.”

7. “Not a symbol but a sample.” When the early Christians gathered in one another’s homes for their communal meals in memory of Jesus, they did what the children of Abraham have always done and still do today when they gather for their sacred meals. They expressed their gratefulness for the world and our participation in it by giving thanks over bread and wine.

That thanksgiving ritual, the focus of their communal meals, is still known by the Greek name they used for it, *eucharist*.

In terms of the scholarly work of Peter Brown and Patricia Crone I mentioned above, we can see that the very action of gathering and giving thanks constitutes “not just a symbol but a sample” of the in-gathering of everything into the all-inclusive *eschaton* community.

One of my most favorite religious thinkers, the Eastern Orthodox liturgical scholar Alexander Schmemmann, describes the assembled community as a “foretaste” of the eschatological ingathering. That’s his way of saying “sample, not symbol.”

The institutional churches have yet to catch on to the new scientific

cosmology. They remain stuck in the static worldview of patriarchy. The cosmic understanding of *ekklesia*, with its dynamic understanding of *eucharist* as foretaste, “not symbol but sample,” remains for them “in eclipse.”

But it is in fact how the early Christians understood their gatherings. They saw it as a “public work.” That’s *leiturgia* in Greek, *liturgy* in English. Literally, it means “the work of the people,” work done for the benefit of *everyone*.

When the early Christians gathered to give thanks, they understood themselves to represent the whole world. To this day, the Eastern Church’s Liturgy of Saint John Chrysostom expresses this perspective quite explicitly. In one of their central prayers they say, “*What is yours we offer you, on behalf of all and for all.*”

One final point. It’s important to note that as “the work of the people,” the thanks-giving ritual was understood to be the action of the whole gathered community. Ideas about the need for a special “ordained” leader were later developments. They are not even mentioned in the Christian New Testament. In the dynamic evolutionary worldview, it’s all of us *together*!



The Passover Seder

I think one of the best examples in our day of people getting together in thanks and gratefulness for our meaningful existence is those groups of family and friends who gather each year at the full moon in early spring to celebrate the Passover seder.

Many years ago, I wrote and published a small booklet called *Passover Seder for Christian Families* to help people do a good job in preparing for and celebrating the seder.

You remember how it goes... As we gather around the table in the early evening darkness, the mother lights the candles giving thanks that we have come again to “this springtime, the season of our freedom.” When the many candles are lighted, we pause to breath in the beauty of the creation around us. We bask “in the light of glory.”

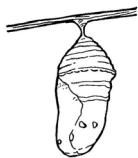
Then we give thanks over the matzoh and wine. We eat fresh parsley dipped in salt tears to affirm life with all its problems. And we eat bitter herbs like horseradish and scallions to acknowledge the hard work needed if we are to be free participants in the world’s evolution. In story and song we celebrate that freedom as the Great Escape from Egypt.

And everyone has a role to play. Making the matzoh, roasting the lamb, preparing the herbs, setting the table with the candles and flowers, reading the stories, leading the songs, joining in the blessings over the food and drink. The most important job of all goes to the youngest child.

That child may be only three or four years old, but they speak for us all when they ask, “Why is this night different from all other nights?”

It’s the ultimate human question: Why do we exist? What is our life all about? What is the meaning of it all?

Owen and Luke, Bitsy and Paige, I am especially grateful that each of you has had the opportunity to take part in the seder!



Conclusion: A Wish and a Prayer

I've come to the end of what I want to pass on to you in this Legacy. ("Finally!" I can hear you saying!)

Our contemporary worldview is different from what it was in the past. We know today that we are living in a dynamic, ever-changing, ever-evolving universe. We also know that, as persons, we are not only emergent results of that cosmic process, but also participants in it and even contributors to it! And we can see that it's an ongoing story.

Individually, we can't do much about how others recognize the story, or express gratefulness for it, or hope for a future within in. But what each of us can do is make good use of that "one wild and precious life" that is ours.

So the final wish of my Legacy for each of you, *Owen and Luke and Bitsy and Paige*, is that you will live out your "one wild and precious life" as *fully* as you can.

Go to it!

GRUMPS



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Note #1: Original Book Proposal

When I learned that a major publishing company was planning a new series of books on science and religion I sent them this proposal. It wasn't accepted by that company or any of the others to which I submitted it. But friends have suggested that I include a version of it in my Notes for Older Readers.

I was delighted to learn that a new series on science and religion is being planned. I'm writing to ask whether you might be interested in something I've been working on along those lines. It is unique in several ways.

The working title is *A Legacy for My Grandchildren*. It's a non-academic "letter"-- really a set of letters or essays, so that "legacy" seems a better term-- specifically addressed to my four grandchildren to read when they are old enough to understand it. It's an explanation of their grandfather's personal understanding of the unity of science and religion: the perspectives I have come to after a lifetime of interest and involvement in both of these aspects of our human existence.

As a book, a good subtitle might be *For Young Adults: A New Cosmology Spirituality*. It's about 90 pages, containing eight chapters in three parts. I'm trying to write a simple, clear, down-to-earth description of how contemporary science and traditional religion form a unity.

It's not meant to be academic. No footnotes. I didn't even want to include a bibliography, but no one supported that idea. My preference would be to have a list of topics ("tags") at the end of each chapter that can be accessed, as young people do these days, via the Internet.

I was a teacher for 40 years of older adolescents and young adults. I taught primarily high school science, mostly chemistry, and college theology, primarily on the nature of religious experience. So I am especially familiar with that age group's often underestimated intellectual ability.

My "Legacy" would be of value to all those young persons who in our day have little real sense of the Judeo-Christian tradition's rich treasures, which have been buried for so long under the static and dualistic perspectives of patriarchy. The perspectives of the New Cosmology (Big History, the New Universe Story) can help us recover those buried treasures.

It is essentially just plain talk about humanity's place in the universe-- and how, at its best, the western religious tradition is a profound expression of the cosmic evolutionary worldview. The main idea is easy to state: reality is dynamic and we are creative participants in that cosmic process.

The world has changed so radically in the last few decades that many young people no longer have strong ties to the religious institutions of the past. Yet they have no less need to understand religion as a basic human orientation that's in our genes.

So my "Legacy" may be especially interesting to those young people who have parents and grandparents still connected with the religious traditions. The young adults themselves don't have the deep attachments the older generations have, and are not aware that they may be missing something of great significance. Grandparents might like to give a copy to their grandchildren. The emphasis is on both basic understanding and practical religious experience with a special focus on the place of ritual.

Also unique is my use of the understanding of human awareness based on both the consciousness studies of C. G. Jung and their much earlier expression in mandalas like the Native American Medicine Wheel. I use those concepts to spell out the big picture worldview still missing from our culture and greatly needed to make sense of traditional religions and contemporary science.

The *Legacy* is unique, too, in my emphasis on a way of perceiving which is precisely what's needed to make good sense of the evolutionary worldview in a religious context. We need to see the "big picture," not just the details, the whole forest, not just the individual trees, if we are to take into account all humanity in its global ecological and cultural concerns. As Pope Francis said in his April 2017 TED talk, "The only future worth building includes everyone."

I asked John Haught (Georgetown) to read my chapter where I quote him on the direction of the cosmic evolutionary process. He graciously did, and said I am expressing his views correctly.

Personal background. I will be 80 years old in November, 2017. The kids call me "Grumps." I have been interested in both religion and science all my life and see myself as an explorer. From my earliest days, I enjoyed the world

and understood myself to be a participant in it. I saw the church tradition as supporting that strong positive worldview at a deep level. But because the institutional church was unable to communicate well, it has become more and more irrelevant to everyday people.

I discovered Thomas Merton in sixth grade and C. G. Jung and Teilhard while a sophomore in college (the same week in February, 1957). I am especially attracted to Native American ways: I have made several wilderness vision quests, am a charter member of the National Museum of the American Indian, and find great encouragement in the life story of Black Elk, who was both Catholic and true to his native non-patriarchal traditions.

I have Masters degrees in science (Wesleyan University) and religion (New York Theological Seminary). The NYTS degree is in conjunction with two years of study as part of the inaugural group of The Guild for Spiritual Guidance, one of the early programs along those lines. I was invited to be part of that inaugural group in 1978 because of my interest Jung and Teilhard, which along with the Christian mystical tradition is the Guild's basic focus.

During my time as a teacher, and specifically in my role of Science Department chairperson, I was able to create several evolution-based high school courses. That was in the early 70s, long before "Big History." One year I even had a senior seminar reading Teilhard's *Phenomenon*. I also taught in the theology department of St. Joseph's University, Philadelphia, in the 1980s, primarily courses on the nature of religious experience. (Of interest: While at SJU, I asked if might teach a course on Teilhard. "Forget it," I was told, "Teilhard's dead.")

Because of my life-long interest in sacred ritual I wrote articles along those lines for various publications. I was founding editor of a magazine focused on ritual in family life, *Family Festivals*, and wrote a practical guide, *Passover Seder for Christian Families*. Both the magazine and seder booklet were published by Resource Publications, Inc., San Jose, CA. I spoke at various diocesan conferences, worked in liturgical renewal in several parishes, and over the years worked with ritual for men's groups and a drumming group.

I have an entry on family ritual in Mircea Eliade's *Encyclopedia of Religion*. And I reviewed the biologist Terrence Deacon's significant book on the emergence of life and mind, *Incomplete Nature: How Mind Emerged from Matter*, for *Skeptic* magazine.

I have participated in rain forest research (in the Amazon Basin and in

Sam Mackintosh

Borneo), helped with Paleolithic rock art studies in the Black Hills, and took part in a month-long study of “Darwin’s *On the Origin of Species* in the Context of Victorian Religion and Science” at Trinity College in Washington, DC.

I also did additional work in Environmental Chemistry at College of the Atlantic in Bar Harbor, Advanced Placement Chemistry at Bowdoin College, and Statistics at Johns Hopkins University. Most of these expeditions and studies were thanks to grants from New Jersey’s Geraldine R. Dodge Foundation, the National Science Foundation, and the National Endowment for the Humanities.

A sample chapter, including the Table of Contents, is attached separately. Thank you for your attention to my proposal.

Sam Mackintosh
129 Westover Dr.
Cherry Hill, NJ 08034
856-216-9463
sam@macspeno.com

Note #2: “I Soaked It Up Through My Feet”

When a friend asked me how I got so deeply into Native American perspectives, I told her that I think I literally soaked it up through my feet, the way C. G. Jung says Americans do. She asked me to tell her about those experiences. This little essay was my response. Friends have suggested that I include it in my Notes for Older Readers.

On my father's side of the family (from 19th century Scotch farmers in South Jersey including a grandfather I never met, to 20th century German immigrants from Bavaria), all the males were fishermen. Mostly fishing at the Jersey shore. Each summer we camped on the beach at the southern end of Wildwood when that was still possible until the end of WW II, when German submarines were in the area. (I never saw one but I heard a mine explode in the ocean early one morning while sleeping in a tent there.) I spent my summer days in a bathing suit, and huddled around a camp fire in the evenings.

The men on my father's side of the family were also hunters as well as fishermen: of ducks on the Delaware River, and rabbits and pheasants, especially on nearby Petty's Island. I was born in North Camden, just across from Petty's Island, and spent much time “down the river” as we said (where some people lived, kept chickens, etc.). And my father's brother had a cabin on the Delaware down near the old town of Repaupo (close to the site of the now Commodore Barry Bridge); the town's name is a Lenape word for shaman. I spent many hunting season weekends there. I also had a friend my age there who was a trapper and I walked his trap lines with him many times.

All this allowed me to experience and enter into the Paleolithic Hunting Culture in a good way. That stage in human development was the culture of Black Elk's people until Wounded Knee, in 1890.

On my mother's side, my relatives were Polish Catholics. They all had that very strong Slavic respect for the Earth and the sense of the holy and sacred similar to that of the Russians with their sense of Mother Russia, icons, holy places and holy times. It's something far deeper than the dualistic Christianity of Western Europe.

So, as I said, I think I soaked up “through my feet”-- by personal experience-- an awareness of the Earth and its sacredness.

I also need to mention a third factor besides those two radically different sides of my family: my own personality's orientation to both science and religion. I'm a strong introvert and strong intuitive, with an Intuitive-Thinking (Myers-Briggs) personality type. Patriarchal culture is essentially Sensation-Thinking; in that perspective, Feeling is written off and Intuition simply isn't acknowledged at all.

But it's via the Intuition or Big Picture function of our minds that the world is perceptible in all its wonder-- no less than via its colors, smells, sounds, etc., which are available via our Sensation function. And somehow I was able to trust my intuitive abilities from an early age. I just “didn't any know any better.” I remember when I first learned about Paleolithic people. My response was an intense sense of belonging: “I'm one of *them*,” I said.

And the Catholic framework gave me access to ritual awareness. One story there: when I was in grade school, I heard in the church one Sunday that on the next weekend there would be a dawn blessing of fire and water on the day before Easter. I told my parents I wanted to go; they said “If you want to get up that early, go ahead.” So I did, and I experienced a magic world which would take hours to describe well. And-- this is a major point-- I was the whole congregation! There was no one there except a priest, an altar server, and me! I was about 8 years old.

Black Elk was an active Catholic for many years; he saw the Native and Christian perspectives about the Great Mystery and sacred ritual as variations on the same thing. I didn't know about Black Elk in those days; he would still have been alive when I was the sole participant in that Saturday morning fire and water ceremony. But once I learned about his life it made good sense to me. Jung says somewhere that Black Elk's mandalic vision is a kind of revelation-- what Henry Corbin in his study of Ibn Arabi calls “theophany”-- for all the world, not just the Lakota people. Again, it makes sense to me.

So putting that all together, I was totally open to the Native American perspectives through personality, family and church experience.

Later in my life, when I was doing the magazine on ritual in family life, I was scheduled once to speak at a big church conference in Rapid City. The

plane from Philadelphia to Denver was delayed and I missed the connecting flight to South Dakota. So I was put up by the airline at the Denver airport, and got a very early plane to Rapid City around dawn the next morning. The route travels just east of the Black Hills and they stood out in all their magic and glory.

During that flight the Black Hills called to me. That's the best way I can describe it. It was as literal a calling as could be. The voices or sounds were so loud I couldn't understand why all the people in the plane weren't gathered at the windows looking out to see what was going on.

I'd been to Mount Rushmore some years earlier on a cross-country trip with a friend, and felt very uncomfortable then. I knew something was wrong there. Didn't know what. But I eventually got back to the Black Hills. One summer I helped with Paleolithic rock art research in the western side of the Black Hills, and later visited Bear Butte, Pine Ridge, Wounded Knee, all the especially significant places. I left flowers at the graves on Wounded Knee, and in Manderson, I smoked the sacred pipe at Black Elk's grave.

How I became a pipe carrier is another not-quick story! I was a heavy smoker, as were my parents and many of my relatives when I was young. As an adult, I was strongly attracted to visit a shamanic woman whom I had met at a Native American conference in the Catskills. I knew she now had something important for me, and made a pilgrimage to visit her a second time. She instructed me to do a tobacco ritual before dawn each day for a certain number of days-- I can't remember now how many. I had a good place-- a circle of plants in my backyard in Westmont.

It was the time of the summer solstice, so I had to get up very early for many days to do that tobacco ritual before sunrise. Lots of tobacco accumulated there and in the heat of those summer days it smelled good. My daughter, smelling it while passing by, said to me, "You need to stop smoking and get a pipe."

I knew immediately that she was speaking "for the spirits" and that I was being told to smoke the sacred pipe. I was shocked. It took me a while to actually get a pipe, with the help of a friend who at that time had Native American work-colleagues in California. And quitting smoking was very difficult.

I had three things going that helped me put these many experiences

together. I learned of Merton from a simple book review. He affirmed my sense of the sacred. And I discovered Jung and Teilhard when I was in college. Teilhard helped me to see the cosmic process in a religious context, and Jung helped me to understand just how the cosmic process speaks to us specifically via sacred ritual.

I think the best way I can say it-- and I don't mean this in a negative sense, although it may sound that way-- is that the universe "set me up." I didn't have a choice!

Note #3: GSG's 40th Anniversary

The Guild for Spiritual Guidance is one of the early modern spiritual guidance programs. As a member of the first group, I was asked to write a brief personal remembrance for its 40th anniversary in 2018.

I first met John Yungblut in the 1970s at Pendle Hill, the Quaker Center near Philadelphia. We were kindred spirits: I had discovered Merton in 6th grade, Jung and Teilhard while in college, and I was delighted when John invited me to join the inaugural Guild group.

On my mother's side of the family, all my relatives were Polish Catholics. They had that strong Slavic sense of the sacred more familiar from the Russian tradition: a love of Mother Earth, of sacred rites and holy icons. It's something far deeper than the dualistic Christianity of Western Europe.

On both sides of my family all the males were fishermen and hunters. I spent my summers in a bathing suit, camping on New Jersey beaches, often huddled around an evening camp fire. I spent many autumn weekends in a hunting cabin along the Delaware River, where a friend my age was a trapper and with whom I walked his trap lines many times. These early experiences allowed me deep insights into the almost forgotten perspectives of humanity's formative Paleolithic culture.

When I first learned about surviving Paleolithic peoples, my response was an intense sense of belonging. "I'm one of *them*," I said. Jung says that Black Elk's mandalic vision is a revelation not just for the Lakota people but for all the world. I entered deeply into Black Elk's world, with its powerful sense of the sacred, and was astounded when I found myself called to smoke the sacred pipe. As culture bringer White Buffalo Calf Woman says, "When you pray with this pipe, you pray with and for all things; the whole world joins with you."

That first Guild group was willing to listen to my story and to honor it as of value for others. I am thankful to all the people of the Guild that I was enabled to acknowledge and accept these rather unconventional details of my life. With special thanks for Polly.

-Sam Mackintosh, Guild I

Note #4: “Matter and Spirit”

“Matter bad, Spirit good” is a four-word summary of patriarchal religion’s centuries-old dualistic view of reality. Teilhard de Chardin’s evolutionary perspective provides us with a wonderfully helpful non-dualistic understanding of the meaning of matter and spirit.

In his best known book, *The Human Phenomenon*, Teilhard includes a postscript called *The Christian Phenomenon*. Today, he would probably call that postscript “The Phenomenon of Religion.” He wrote these texts in the 1930s and 40s, when patriarchal religion’s static and dualistic views had been the norm for many centuries.

Even as we are becoming ever more aware that humanity is moving out of the patriarchal stage of its development, we are still stuck to a great extent with the dualistic meanings of words like “matter and spirit,” “earth and heaven,” “body and soul.”

Teilhard helps tremendously in providing a non-dualistic understanding of those almost unavoidably dualistic-sounding terms.

His main point is quite simple. He says that rather than seeing “matter and spirit” as things-- as ontological substances in the old Greek philosophical sense-- we can better understand them as basic aspects of the whole evolutionary universe. They are simply two of the most profound characteristics of all things.

In brief, Teilhard’s view is that “matter” and “spirit” are simply the outside and the inside of reality. In the original English translation of *The Human Phenomenon*, he calls them the *Without* and the *Within*-- the outer and inner features of the one cosmic evolutionary process.

Teilhard’s views have profound implications. When we look at the biggest picture of evolution on Earth, we see that, just as the Tree of Life grows from its roots in the most elementary material particles and atoms, so too does life--agency, mind, conscious awareness-- arise along with that increasing complexity.

He calls this fact the “law of complexity-consciousness.” It’s a short-hand summary of the whole cosmic story. Just as “matter and spirit” summarized the dualistic patriarchal worldview, so “complexity-conscious” summarizes

the non-dualistic evolutionary perspective.

The part of Teilhard's worldview which I think is especially helpful is his emphasis on the fact that *both spirit and matter have been present from the start of things*. Reality has had an inside and an outside from the very beginning of the world fourteen billion years ago.

Matter, as the physical-external aspect of reality, is more evidenced in the earlier stages of the evolutionary process, while spirit, the interior-internal aspect of the cosmic process, manifests more at the advanced stages of cosmic development. But both matter and spirit are profound aspects of the whole of evolutionary reality from the first moments of the Big Bang.

This offers us a two-fold understanding. First, that as life, mind, soul, and psyche, Spirit pervades the whole of reality, from the most elementary wave-particles, atoms and molecules, to the most complete union of minds and hearts at the fullness of the process.

But along with Spirit, Matter also pervades the entire cosmic process. Matter is present not only at the elementary stages of the universe's development but, following the law of complexity-consciousness, is present even at the highest stages of the world's evolution.

That first idea helps us to understand the human spirit (mind, soul, psyche, personal consciousness, we still have too many names!) *not as a dualistic non-material substance* that is created separately from the rest of reality and that after a time of trial is intended to escape from the cosmos. Instead, we can see that our soul (mind, psyche) is an integral aspect of the cosmic process from the start.

And that second idea, that matter is simply the outer manifestation of the one same cosmic process, is especially helpful in making sense of those almost-totally ignored ancient but traditional religious ideas about the physical fulfillment of the world.

By "ancient but traditional religious ideas" I mean those long-ignored perspectives which include the expectation of bodily resurrection and the transfiguration of the cosmos.

These perspectives-- about reality made new: a new heaven and new earth-- have been preserved in the creeds of Western religion, but they have received little attention in modern times with the persistence of the

perspectives of cosmic dualism.

In the evolutionary perspective, the resurrection of the body and the transfiguration of the cosmos fit very well with the eschatological understanding of the fullness of reality. Indeed, they fit especially well with how, in the words of Philadelphia's Rabbi Arthur Waskow, the "furthest reaches of the Bible see the great arc of the human future."

If it seems I'm exaggerating here, since the body-soul distinction and matter-spirit separation has been such a basic assumption of dualistic religion, you might check out those ancient Zoroastrian prayers I mentioned in Chapter 8. They're in Section 1 (The roots of the eschatological vision) and in Section 3 (The theophanic worldview).

Remember that the Zoroastrians predate Abraham, Jesus and Mohammed. And that these basic ideas about the material fulfillment of the world are still preserved in the sacred writings of all three of the Abrahamic traditions.

They may remain "in eclipse," but these dynamic, evolutionary-- non-static and non-dualistic-- perspectives really are at the heart of the religious traditions of the West.

Teilhard sums it all up by saying that Matter and Spirit are simply the outside and the inside of our one dynamic universe. And that, as he says, "in the end nothing good will be lost."

Note #5: Allen's Response

Allen is an old friend with a very rich background. He was a lover of art and music and the culture of India, an Eastern Orthodox priest and a leader of men's groups. He was also a Jungian counselor with a PhD from the Pacifica Graduate Institute, and as a civilian, he developed a widely used program for the US Navy for dealing with spousal abuse. He was raised in the San Diego area, and he and his wife moved back there after his work on the East Coast. He was seriously ill with multiple sclerosis for many years.

I had sent him an early version of my 'Legacy' asking for comments; he replied with a wonderful positive appreciation of my efforts, which I'm presenting here. When I later asked him if I might use his response in these "Additional Notes" he said, "Yes, of course."

He also said, "I have something to add, which I'll send ASAP." But he never got to send it. Shortly afterwards he entered his last illness. As the Eastern Churches pray, "May his memory be eternal!"

Sam--

I read "Legacy" in one sitting. It was so compelling I could not stop. Very moving. In fact my eyes got tearful by the conclusion.

I know you did not ask for or expect feedback, but I learned so much from your deceptively simple format that I wanted to tell you that. Profound insights and valuable connections indeed!

I am especially glad you acknowledged the anticipatory, often prophetic contributions of poets! Schmemmann once urged us in class to "read much more poetry than theology for the epiphanic experiences you can get nowhere else." One of my favorite verses comes from Shelley's "Hymn of Apollo," speaking of divine/human consciousness even more than a century before Huxley:

I am the eye with which the Universe
Beholds itself, and knows it is divine.

Your writing fulfilled one of its purposes by stimulating a multitude of such related thoughts in this reader. Your "Legacy" certainly deserves a widespread readership through publishing.

Your grandchildren are surely blessed in having such a wise and loving grandfather.

I also feel especially fortunate and privileged in having you all these years as a friend, reflecting, honoring, appreciating, exploring, celebrating, and revealing the inexhaustible, numinous, and ultimate Mystery that we can never stop knowing. I am grateful to be the beneficiary of your willingness to share the fruits of your fully developed Fourth Function.

GOD GRANT YOU MANY MORE YEARS!

Much gratitude, Allen [Anthony]

Note #6: A Final Note For Older Readers

I have been working on this Legacy project for several years, and while I feel OK about what I have written, I also feel I haven't done an adequate job with expressing as well as I might my understanding of religion itself in the context of modern science.

So that's what this final note is about. It's a brief description of my understanding of just what religion is, in as much as we can understand it in terms of both our personal experience and the evolution of the universe. As I see it, contemporary science offers a far better perspective on religion than the old static worldview, which separates us from nature, from ourselves and from the mystery behind the world.

As I'm writing this, in early 2019, the term "religion" has become almost a dirty word in America. We have what's called the "sex abuse crisis" and a more basic credibility crisis not only in the Catholic church but also in many other denominations, and the religious Fundamentalist context seems to support both terrorism and psychopathic politicians. There's also the wholesale dismissal of the very idea of religion as something real by the American academic community (*Are they slow!*). And all this with the resulting confusion on the part of just about everyone else.

So. Having an understanding of religion as something based on the scientific worldview of cosmic evolution is of tremendous value.

1. When we try to understand religion in the cosmic perspective, the first thing we can see is that religion is something *natural*. It is as natural as the evolution of life itself and the emergence on Earth of self-aware persons. We can see that, like life and human conscious awareness, religion is a natural emergent result of the evolution of the universe.

We can see that, as part of the evolutionary process, religion emerged when self-awareness was sufficiently matured, just as self-awareness itself emerged when the development of the brain and nervous systems of pre-human animals reached a sufficiently stage of complexity. And just as many millions of years earlier living things appeared on Earth when the chemical and physical conditions were just right.

The point is that, recognizing that increasing stages of complexity emerge

as the cosmic process proceeds, we see that the emergence of religion is a natural development in the cosmic emergence process.

2. With what we know from contemporary science about physical and chemical processes, we can understand better how living things emerged from matter and energy at a more complex stage of the cosmic process. And from what we're learning about the nervous system and the brain, it's clear that at the even more complex stages of highly-developed living things, our unique inner self-awareness has emerged.

We see that humans share with all living things that specific characteristic we call "agency." It is the ability of every life-form to perceive and respond to the environment outside itself. Along with many higher animals, we can even envision a reality that's not yet present, as when a frog, for example, sits quietly waiting for an insect to approach.

Human agency, however, is something more special than this ability to envision what's not present. It's the ability of every human self to perceive and respond to itself-- to our "within" as well as to our "without."

A really fine description of the developmental process by which human self-awareness has emerged from within the cosmic process is available in the 9-minute YouTube presentation by the Kurzgesagt ("In a Nutshell") group from Germany. It's called simply "Consciousness":

<https://www.youtube.com/watch?v=H6u0VBqNBQ8&feature=em>.

3. So in the evolutionary context, we can see that religion is something natural to the universe. It has emerged on planet Earth as a result of the continuing development of our human consciousness.

To describe just how religion emerged, I need once again to draw on what I call my "mandalic" perspectives, as I did in Chapters 3 and 4 of this *Legacy*, where I spelled out the four-fold nature of consciousness.

I have gathered these perspectives from many sources during my lifetime of trying to understand the mystery of human existence. The easiest perspectives to understand seem to be *the four functions of consciousness* as described by C. G Jung and *the images of the animals of the four directions* depicted on the Native American Medicine Wheel.

I don't want to describe all that again here; the main idea is clear enough. We know of course from personal experience what we mean by

“consciousness.” The great value of the mandalic perspective is that it helps us to see that conscious awareness works in four different ways.

By two of the functions of consciousness we *perceive* reality, and by the other two we *respond* to our perceptions. Jung calls the perception functions “Sensation” and “Intuition” and the evaluative functions “Thinking” and “Feeling.”

On the Medicine Wheel, “Sensation” is depicted by the White Buffalo of the North, and “Intuition” by the Black Bear of the West. “Thinking” is depicted by the Golden Eagle of the East, and “Feeling” by the Green Mouse of the South.

The details quickly get confusing, so you might want to look back at Chapters 3 and 4 of the *Legacy* to check on some of the details. For an understanding of religion it’s well-worth the effort to see that the four functions of our minds are emergent results of the evolutionary process.

So a basic question is this: What *are* these functions of consciousness? In fact, they are simply the basic biological instincts which we share with all living things. They are the normal and spontaneous ways living things act. We experience them as drives or urges; I especially like the term “imperatives.” By these cosmic imperatives, the evolutionary process motivates all life-forms, including ourselves, to live and move and be.

4. Here’s a summary of the four cosmic imperatives as I can describe them briefly with regard to ourselves, with the help of Jung’s wording and the Medicine Wheel imagery:

NORTH. Our White Buffalo Sensation function drives us to seek food, shelter and sex for our survival and the perpetuation of the species. We share with all living things this basic biological imperative to do what’s needed to stay alive and have offspring. It’s easy to see that the global evolutionary result of this cosmic imperative to seek food, shelter and mates is the *survival* of human life on Earth.

SOUTH. Our Green Mouse Feeling function provides us with a cosmic drive to huddle or snuggle, just like a litter of puppies. By instinct we gather with other persons, especially in the face of disaster or when communal work needs to be done. This gathering instinct is for the collective action of a group or team which is needed to preserve our resources and for our defense from

predators. In terms of the whole of human life, this evolutionary imperative to *cooperation* with others results in the emergence of human *society*.

EAST. Our Golden Eagle Thinking function motivates us to share with others our knowledge about how the world works. We have a natural, inborn instinct to pass on to others, especially our young, the knowledge we have personally acquired about the workings of world. At the global level, the result of this *cognitive* imperative is what we call *culture*.

WEST. The fourth consciousness function is the one which in the Legacy I had such a difficult time naming. I ended up calling it the “Missing Fourth.” Western culture still doesn’t deal with it. I recently heard a Buddhist chaplain at the University of Pennsylvania Hospital describe our Black Bear Intuition function simply as “a drive to something big,” and it does indeed deal with something very big! This fourth function of our conscious minds results in our basic instinct to see and to take in *everything*-- including, especially, our personal place in the biggest cosmic picture. It’s the unique-to-humans imperative not only to have the broadest view we can of all reality, but also to understand ourselves as creative participants in it. And it’s the evolutionary result of this imperative to attend to our personal experience and to enter into the dynamic cosmic story that we call *religion*.

IN BRIEF. The Biological Imperative results in LIFE, and shows itself in a tremendous number of forms of living things. The Cooperative Imperative results in SOCIETY, and shows itself in the great variety of human societies. The Cognitive Imperative results in CULTURE, and shows itself in the various forms human cultures take. And that fourth, Creative or Participatory Imperative, results in RELIGION, and shows itself in the tremendous variety of humanity’s religion traditions.

The main point in all this is that when we look at reality in terms of *anthropos*-- that is, when we look at both our personal existence and humanity as a global whole-- we see that in the same way that the evolutionary process at the human level results in Survival, Society and Culture, it also results in the emergence of Religion.

We also can see then that, as a natural emergent result of the evolution of the universe, Religion takes on different forms at different places and in different times, in the same way that human cultures, societies, and even our diets do. Just as the Earth’s various plant and animal forms adapt themselves

naturally to their environmental conditions, so the religious traditions take on forms suitable for their place and time.

Again, the main point is that Religion is a natural emergent result of the evolution of the universe. It is just as natural as an adult motivated by the Thinking function teaching an almost-teen how to fry an egg. It's just as natural as parents, motivated by their Feeling function, to hug their kids. It's just as natural as your need and mine, motivated by the Survival imperative, to have breakfast when we get up in the morning.

When we envision these personal and practical actions taking place hundreds of thousands of times each day on our planet, we can get a good idea of just what the emergence of *society* and *culture* mean. And the same is true of *religion*. Motivated by that fourth function of human consciousness, religion is the emergent result of the personal experience of millions and millions of people on the Earth every day.

I think *that* may be the biggest insight that the evolutionary perspectives of the new science story can offer us. Religion is both a personal experience and something which we share with billions of human beings.

And recognizing that religion is something natural to the cosmic process helps us to see that the various forms of the world's religions have many things in common. The religious traditions of the world simply are not as different as they have appeared to be in the past.

5. While the variety of religions may be as natural as human societies and cultures, in American society and in Western culture neither the naturalness of religion nor the very nature of religion have yet become obvious.

Two questions, then. Just what *do* the various religious traditions of the world have in common? And just what *is* religion in the scientific context?

The rest of this Final Note #6 is devoted, then, to these two concerns. In section 6, I'll spell out my understanding of what it is that all the religious traditions of the Earth have in common. And in part 7, I will attempt to describe as best I can just what religion is in itself when we understand it specifically in terms of both personal experience and cosmic evolution.

6. With regard to what the various religious traditions of the Earth have in common, I want to emphasize that I'm focusing on precisely what they share. Not surprisingly, the mandalic perspectives help here, too.

NORTH. All the religious traditions in some way or another urge us to care for those in need. Not just the young or old or sick, but everyone who needs help to live more fully. In our day, this also includes care for the natural world. Clearly, this aspect of the world's religions comes from the practical orientation of the Sensing function, our biological imperative to deal with immediate needs for the survival of life in the here and now.

SOUTH. All the world's religious traditions share in common the fact that they provide us with a list of *do's and don'ts* with regard how we best behave. This moral emphasis on treating others properly, which all religious traditions share, obviously comes from the Social imperative of our Feeling function.

EAST. Religions also offer perspectives about reality which they hold to be authentic facts. These "teachings" or "doctrines" clearly come from the Cultural imperative and our cognitive Thinking function.

WEST. But what about that fourth function? The one which requires us to deal with "something big" and which urges us to take an active role in the cosmic process? You will remember, from Chapter 5 of the *Legacy*, that what empowers us to participate in the evolution of the universe is what we call "images." And images are presented to us both personally, in the form of dreams and visions, and communally, in the form of sacred rites and stories. It's this focus on empowering images that's common to all the religious traditions of the Earth.

IN BRIEF. The Biological Imperative which results in *life* on Earth shows itself in all religious traditions as their common emphasis on *good works*: taking care of the sick, feeding the hungry, sheltering the homeless.

The Cooperative Imperative which results in society shows itself in the religious traditions in its emphasis on *right behavior*: being cooperative, opting for truth, doing no harm.

The Cognitive Imperative which results in humanity's many cultures shows itself in global religions as *beliefs about the world and ourselves* which it holds to be true: that people count, that our life is valuable, that our existence is meaningful.

And that fourth, *Participatory* Imperative-- which is what results in the religious traditions of the world in the first place-- shows itself in the central role all of them give to *images, rites and stories*, for our personal

empowerment to creatively participate in the universe's evolution.

7. My final thought in this last "Note for Older Readers" is to share as best I can my understanding of just what religion is, in terms of our personal experience and the modern worldview of time, space, matter and energy with its resulting biological, social and cultural processes.

As I see it, the question is this: What is it that each of us is responding to when we attempt to follow those four cosmic imperatives we experience, to opt for good works, to practice right behavior, to hold to correct thoughts and to quest for empowering images?

We might also ask the question this way: What is it that is showing itself to us via our need to participate in the cosmic evolutionary process?

Whatever it is, it's deeper than words. All the world's religious traditions agree on that. Our cognitive Thinking function is of no help here.

But our personal experience is.

What's beyond words is showing itself to us whenever we experience awe and wonder at what exists, and even at the fact that anything at all exists. It's always and everywhere giving itself via the cosmic process.

And it is especially showing itself when we recognize our unique position at this specific time and place in the world's billions-of-years-old history.

We count, right here, right now. We're needed, to be ourselves! As participants in the evolution of the world we can take great delight in our existence, knowing that our life and effort to be ourselves is significant.

In the cosmic context, religion offers a very positive view!

Note #7: Book List

This list includes many of the books that have been significant for me over the years. I've grouped them into the three areas corresponding to the main parts of the Legacy: "Kosmos, Anthropos and Theos." There's much overlap, of course. You will not find many of these books on a "best seller" list, but you can always get them from your local library via Interlibrary Loan.

KOSMOS

Ball, Philip. *Curiosity, How Science Became Interested in Everything* (University of Chicago Press, 2012)

Berry, Thomas. *The Great Work: Our Way into the Future* (Broadway Books, 2000)

Berry, Thomas. *The Dream of the Earth*, Preface by Terry Tempest Williams & Foreword by Brian Swimme (Counterpoint, 2015)

Bryson, Bill. *A Short History of Nearly Everything* (Broadway Books, 2004)

Buonomano, Dean. *Your Brain is a Time Machine, The Neuroscience and Physics of Time* (W. W. Norton & Company, 2017)

Cajete, Gregory. *Native Science, Natural Laws of Interdependence* (Clear Light Book, 2000)

Carle, Eric. *The Very Hungry Caterpillar* (Philomel Books, 1994)

Chaisson, Eric and Lola Judith Chaisson. *Epic of Evolution: Seven Ages of the Cosmos* (Columbia University Press, 2007)

Coelho, Mary Conrow. *Awakening Universe, Emerging Personhood: The Power of Contemplation in an Evolving Universe* (Wyndham Hall Press, 2002)

Coelho, Mary Conrow. *Recovering Sacred Presence in a Disenchanted World* (Pendle Hill Pamphlet 433, 2015)

Coen, Enrico. *Cells to Civilizations: The Principles of Change That Shape Life* (Princeton University Press, 2012)

Damasio, Antonio. *Self Comes to Mind: Constructing the Conscious Brain* (Pantheon, 2010)

D'Aquili, Eugene G., Charles D. Laughlin, Jr, and John McManus with Tom Burns, Barbara Lex, G. Ronald Murphy, S.J., and W. John Smith. *The*

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With my gratefulness and thanks to all
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Sam
Easter, 2019

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*True wealth is not measured in money or status or power.
It is measured in the legacy we leave behind
for those we love and those we inspire.*

CESAR CHAVEZ

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