The Sacred Cosmos: Christian Faith and the Challenge of Naturalism

5. Human Nature: Embodied Self and Transcendent Soul, Part 2

Conclusion: A Sacred Cosmos

Sunday, February 7, 2010
10 to 10:50 am, in the Parlor

Presenter: David Monyak

St. John in the Wilderness
The Sacred Cosmos: Christian Faith and the Challenge of Naturalism

(Reissued Jan 2009 by Wipf and Stock)

"In this careful and closely argued book, Terrence Nichols presents a vigorous challenge to naturalistic thinking. We are offered the persuasive vision of a world of many-leveled richness, whose Creator is continually active within its unfolding history."
—John Polkinghorne, University of Cambridge

"This is a uniquely valuable work for our time. The Sacred Cosmos takes on the ambitious task of a synthesis of the contributions of contemporary science, basic Thomistic philosophy of being and the human person, and basic themes of Christian theology on God, creation, and the relations between God and the world. The author, a theologian, brings to his task an amazing background and range of competence both in contemporary science and ... Christian theology. ... The most valuable part of the book is the author’s powerful and cogent critique of the widely influential ‘scientific naturalism’ of our day, which claims the only reliable way of knowing is that of modern science, and all that exists can be explained by the evolving interaction of material elements, leaving no place for anything of the spiritual order, like the human soul, moral values, or God."
—W. Norris Clarke, S.J., Fordham University

"In this sensible and solid reply to scientific atheism (or ‘naturalism’), Nichols charts the way for a new harmony between science and spirituality. I recommend it to anyone interested in the interaction of religion and science."
—Alan Padgett, author of Science and the Study of God: A Mutuality Model for Theology and Science

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The Sacred Cosmos
Christian Faith and the Challenge of Naturalism

- **Jan 3.** God and Nature
- **Jan 10:** Origins: Creation and Big Bang
- **Jan 24:** Evolution: The Journey into God
- **Jan 31:** Human Nature: Embodied Self and Transcendent Soul, Part 1
- **Feb 7:** Human Nature: Embodied Self and Transcendent Soul, Part 2.
  Conclusion: A Sacred Cosmos
Almighty and everlasting God, you made the universe with all its marvelous order, its atoms, worlds, and galaxies, and the infinite complexity of living creatures: Grant that, as we probe the mysteries of your creation, we may come to know you more truly, and more surely fulfill our role in your eternal purpose; in the name of Jesus Christ our Lord.

For Knowledge of God’s Creation, Book of Common Prayer, p. 827
This Week:


Conclusion: A Sacred Cosmos
Introduction: Naturalism
Introduction

The Challenge of Naturalism

- Naturalism is the philosophical theory about reality that declares:
  - nature is all that exists,
  - there is no reality that is greater than and independent of nature,
  - there cannot be any hope of an afterlife, nor any means to really transcend our natural condition.
Introduction

Can Naturalism Explain the World?

- How well can Naturalism actually explain the world and humanity?
- We have been considering naturalistic versus Christian explanations for:
  - the origin of the universe (Jan 10)
  - evolution (Jan 24)
  - human nature (Jan 31 & today).
What is a Human Being?
What is a Human Being?

Do We Have Souls?

- We can distinguish *two* primary perspectives on the human person:

  1. “Dualism:” we are beings composed of a **body** and a **soul**
     - **body**: material and mortal
     - **soul**: non-material; can survive the death of the body
  
  2. “Monism:” we are “psychosomatic” unities
    - A single, purely material being, with a thinking brain
What is a Human Being?

Do We Have Souls?

- Christianity, Judaism and Islam have traditionally affirmed that we have an immortal soul that:
  - survives after the death of our body
  - that will someday be reunited to a new resurrected body

- Modern science however holds we are psychosomatic unities, single purely material beings.
What is a Human Being?

A Psychosomatic Unity: Reductionism

- There are two camps in the view we are psychosomatic unities:

  1. **Reductionism:**
     - there is nothing in the person that cannot be explained by physics, chemistry, and biology
     - since physics, chemistry, and biology are largely deterministic, free will is suspect, an illusion
What is a Human Being?

A Psychosomatic Unity: Reductionism

The Reductionist Francis Crick maintains:

- There is no real “I” behind the eyes of a person, only sophisticated neural nets which determine our behavior
- “I” is an illusion
- Free will is an illusion
- “I” do not decide; it is the neuronal networks in my brain that react, as they have been programmed to do.

Francis Crick, 1916-2004, Co-discoverer of DNA
What is a Human Being?

A Psychosomatic Unity: Emergentism

■ There are two camps in the view we are psychosomatic unities:

■ 2. Emergentism
  ■ Complex systems like the human brain, develop qualitatively new properties, properties of the whole.
  ■ The whole is greater than the parts and cannot be entirely explained on the basis of the parts.
  ■ Example: consciousness with a true freedom of action.
  ■ Such emergent properties are “causally effective:” they can influence and change their component parts (“top-down” causality)
What is a Human Being?

A Psychosomatic Unity: Emergentism

- Note you can be a Christian and still believe we are psychosomatic unities, without a soul.
- We profess in the Creed not a doctrine of an immortal soul, but a doctrine of the resurrection of the dead.
A Sacred Cosmos

Outline (Last Session and Today)

- Human Nature: Embodied Self and Transcendent Soul
  - Review biblical and historical views of the nature of human beings (*last session*)
  - Review modern views of human nature, including:
    - modern science’s account of the evolution of human beings (*last session*)
    - results from neuroscience (*last session*)
  - Review problems with the view that we are psychosomatic unities:
    - problems with the **Reductionist view** (*last session*)
    - problems with the **Emergentist view** (*today*)
  - Look at how we might view ourselves as beings with both a **body and soul** in the 21st century (*today*)
- **Conclusion: A Sacred Cosmos** (*today*)
Emergentism
Emergentism

Definition

- One response to the psychosomatic unity of the person is “Emergentism”
- The human being is a unitary physical entity
- In very complex systems, entirely new phenomena “emerge” which cannot be entirely explained on the basis of the parts.
  - The whole is profoundly greater than the parts.
  - These new emergent properties can also be sources of causation – they can effect their parts and their environment in a top-down causality
- In particular, mental properties such as consciousness, self-awareness, and intentionality have “emerged” as the brain became more complex.
- A person therefore cannot be simply reduced to her physical components.
Emergentism

Definition

- As the brain increased in structural complexity, at some point it underwent something analogous to a “phase change” in which the new phenomena of mind, consciousness, and a capacity for spiritual awareness emerged.

  - They did not necessarily require a supernatural action on the part of God, or the presence of any spiritual principle, like a soul or spirit.
Emergentism

Definition

- Human beings, then differ from animals in *degree* but not in *kind*.
  - Humans have more developed neocortices than the higher apes, and so are capable of greater degrees of abstract thought and symbolic language.
- There are many emergentist who are Christian.
- There is no immortal soul, so for an emergentist, our only hope for an afterlife is a belief in bodily resurrection.
Criticism of Emergentism
Criticism of Emergentism

Five Concerns About Emergentism

- Nichols has several concerns about the emergentism:

  - (1) It follows from the emergentist position that the self dies with the body (there is no soul that survives after death)
    - Individual human beings are resurrected through Christ at the end of history – essentially a re-creation of the person.

- Emergentism does not adequately explain:

  - (2) how human beings can have a personal relationship with God
  - (3) the presence of genuine human freedom, manifested in free choice and free reasoning processes
  - (4) how God can have conscious properties, such as knowledge, awareness, intentionality, and be capable of personal relationships
  - (5) the evidence of near-death experiences.
1. Resurrection Without Any Soul

- Resurrection without any soul, that is, without any continuing personal identity of the deceased after death, is a hard sell.
- Most Christians believe that the dead are somehow still alive, right now, in a better place, with God.
- Many Christians believe we can pray with and to the saints.
Criticism of Emergentism

2. Personal Relationship with God

- The experience of deeply religious believers is not simply imagining and placating God as some external object.
- Authentically religious people experience a personal relationship with God. They experience:
  - God’s call on their lives
  - God’s response to their prayers,
  - God’s presence in their lives
Criticism of Emergentism

2. Personal Relationship with God

- As the Psalmist puts it:
  “You show me the path of life, in your presence there is fullness of joy . . .”
  (Psalm 16:11)

- Paul writes:
  “. . . it is no longer I who live, but it is Christ who lives in me.”
  (Galatians 2:20)
Criticism of Emergentism

2. Personal Relationship with God

- If this is indeed experience of an Other and not some aspect of the self, how can it be explained by an emergentist model of human nature?
- How is it possible to have a relationship with an immaterial Other who cannot be known by the senses?
  - Unless we ourselves have a nonmaterial part (a soul) that can interact with the non-material divine?
Criticism of Emergentism

3. Freedom

- Human free choice means that we could have chosen to do something different than what we actually did.
  - Whereas a computer cannot choose to do other than what it is programmed to do
- We can resist strong inclinations and desires, such as anger, sexual urges, and other cravings, and do so because of moral convictions.
- We might have reasons to do something, but the reasons do not compel us.
3. Freedom

- How can such authentic freedom develop in a wholly material system, however complex it is?
  - The emergentist argument is, roughly, that as the brain becomes more evolved, with a neocortex and a capacity for self-awareness, freedom develops also.

- It is reasonable to believe this?
  - Material systems, even chaotic systems or highly complex systems (like computers) might exhibit randomness (and therefore unpredictability), but they do not exhibit freedom.

- Nichols suggests freedom comes about only because God establishes a personal relationship with the human person at a very early stage in their development.
Criticism of Emergentism

4. Can God Know?

- The biblical vision of God is that
  - God is personal,
  - knows his creatures,
  - has personal relationships with individual human beings,
  - loves them,
  - responds to their prayers,
  - and therefore has awareness, knowledge, and intentions.
Criticism of Emergentism

4. Can God Know?

- Yet emergentism suggests knowledge is only possible because we have highly complex physical brains.

- But if knowing depends on a complex nervous system and brain, how can God know?
  - God does not have a complex nervous system, or a brain.

- God is not physical at all.
Criticism of Emergentism

4. Can God Know?

- We could say that God’s consciousness is explainable on an entirely different principle than human consciousness.
- But this leaves us with a deep *dualism*, a gulf between God and humankind.
- The attraction of emergentism is that it avoids Rene Decartes’s radical dualism in human beings: a physical body and an immaterial soul,
- But emergentism seems to require instead a radical, and perhaps unbridgeable, dualism between God and God’s creatures.
Criticism of Emergentism

4. Can God Know?

- Essentially, this dualism between God and God’s creatures in emergentism arises because emergentism, (like naturalism), starts with the physical universe as what is most real, and then tries to work its way up to consciousness and God.

- Nichols will suggest that the better way is to start with consciousness or mind itself as what is most real and foundational in the universe, and work from consciousness to the material world.
Criticism of Emergentism

5. Near-Death Experiences

- Near-Death Experiences are usually ignored in discussions of the human person and the soul.

- This is partly because:
  - their interpretation is controversial,
  - the evidence supporting them is largely anecdotal.

- But it is also partly because they tend to undercut naturalism and to point in the direction of dualism – a position that is seen as intellectually indefensible by naturalists and by the scientific community generally.
Criticism of Emergentism

5. Near-Death Experiences

- Near-death experiences (“NDEs”) were made popular by psychiatrist Raymond Moody’s book *Life after Life*, first published in 1975.

- Certain elements are found to recur in most experiences. A typical instance: a comatose patient in an operating room:
  - The patient feels herself leaving her body,
  - Travels down a “dark tunnel,”
  - Comes into a heavenlike world of great beauty,
  - Encounters a “being of light” who communicates with her through direct thought transference,
  - Sees a review of her life,
  - Meets other (dead) persons,
  - Is given a choice of whether to go back into her body or not
  - The patient experiences no pain until she returns to her body, which causes great pain and distress.
5. Near-Death Experiences

Nichols highlights two features of Near-Death Experiences (NDEs) which are difficult to explain medically:

1. Many persons seem to be able to accurately describe what is going on around them or in other places from an out-of-body perspective: “remote viewing”

2. Many claim to have seen dead loved ones during their experience

   Sometimes those encountered were persons whose death was unknown to the patient having the near-death experience.
The question is:
- Are patients really perceiving outside of their body?
- Can consciousness and perception exist and survive outside of the brain?
Criticism of Emergentism

5. Near-Death Experiences

- Medical explanations have included:
  - drug effect
  - lack of oxygen in the brain
  - endorphins in the brain
  - hallucinations
  - the presence of residual consciousness in the patient incorrectly thought to be comatose
    - hence patient can perceive what is happening around her
Criticism of Emergentism

5. Near-Death Experiences

- A widely quoted controlled trial by Atlanta cardiologist Michael Sabom seems to support the view that consciousness and perception can exist outside the brain.

- Sabom tested whether those who claimed to have had an NDE could accurately describe the resuscitation procedure used to revive them from a cardiac arrest.
  - For 32 patients who experienced NDEs and had out-of-body experiences:
    - 81% could give general visual descriptions of what was happening in the room during their NDE. None made any errors in the description
    - 19% could give precise visual details of the procedure
  - In contrast, in a control group of 25 “seasoned cardiac patients” admitted to a coronary care unit, 80% made at least one major error when asked to describe a cardiac resuscitation procedure.
Criticism of Emergentism

5. Near-Death Experiences

- In 2008, the three-year AWARE (AWAreness during RESuscitation) began, involving the collaboration of 25 major medical centers through Europe, Canada and the U.S.

- The study is prospectively examining some 1,500 survivors of cardiac arrest to:
  - study consciousness during clinical death
  - test the validity of out of body experiences and claims of being able to see and hear during cardiac arrest through the use of randomly generated hidden images that are not visible unless viewed from specific vantage points above.
Criticism of Emergentism

5. Near-Death Experiences

- One of the lead researchers of the study, Dr. Sam Parnia of Cornell Medical Center in NYC, justified the need for the study in a *Time* article:

- **Now, if you look at the mind, consciousness, and the brain, the assumption that the mind and brain are the same thing is fine for most circumstances, because in 99% of circumstances we can't separate the mind and brain; they work at the exactly the same time. But then there are certain extreme examples, like when the brain shuts down, that we see that this assumption may no longer seem to hold true. So a new science is needed in the same way that we had to have a new quantum physics.**
Criticism of Emergentism

Solution: Body and Soul

- Nichols suggests these five problems with emergentism can be addressed by returning to a view we are “body” and “soul”

- In his proposal:
  - We might consider the “soul” as a field of “active information” = the organizing principle, the holistic cause of the body.
  - As such, the soul is affected by the physical condition of the brain and body.
  - The person is therefore, in this life, a psychophysical unity:
    - Damage to the brain would impede the relevant mental processes.
    - Furthermore, the embodied soul shapes its own destiny by the choices it makes in this life.
  - However, the soul and the essential features of consciousness can survive bodily death.
The Soul as Holistic Cause
The Soul as Holistic Cause

Thomas Aquinas’ View of the Human Soul

- Thomas Aquinas, following Aristotle, suggested the human soul was the “formal cause” of the human body.
  - Formal cause = the organizing cause, that which causes the whole to behave as a unity.

- Following Aquinas, Nichols suggests we might think of the human soul as the:
  - “holistic” cause of the body, the ultimate organizing principle of the body; in particular:
  - A field of active information, informing the whole, keeping it in order, *not yet* detected by science.
The Soul as Holistic Cause

“Active Information”

- What is “active information”?

- Drill down to the “ground of being,” the realm of subatomic particles, and one finds ephemeral point particles that flit in and out of existence.

- Their possible or potential behaviors are “governed” by mathematical equations.
The Soul as Holistic Cause

“Active Information”

- Maxwell’s equations governs behavior in classical electromagnetic fields

\[
\nabla \cdot \mathbf{E} = \rho \\
\n\nabla \times \mathbf{B} - \frac{1}{c} \frac{\partial \mathbf{E}}{\partial t} = \frac{\mathbf{j}}{c} \\
\n\n\nabla \cdot \mathbf{B} = 0 \\
\n\n\nabla \times \mathbf{E} + \frac{1}{c} \frac{\partial \mathbf{B}}{\partial t} = 0
\]
The Soul as Holistic Cause

“Active Information”

- The Dirac wave equation governs possible behaviors in an electromagnetic field in the quantum mechanical realm:

\[
\left\{ \gamma^\mu \left( i \frac{\partial}{\partial x^\mu} - eA_\mu \right) - m_e \right\} \Psi(x^\nu) = 0
\]
The Soul as Holistic Cause

“Active Information”

- The equation of Einstein’s General Theory of Relativity governs behavior in gravitational fields:

\[ R_{\mu \nu} - \frac{1}{2} g_{\mu \nu} R + g_{\mu \nu} \Lambda = 8 \pi G_N T_{\mu \nu} \]
The wave equations of Glashow-Weinberg-Salam Model governs possible behaviors in the field of the combined electro-weak force:

\[ \mathcal{L}_E - \mathcal{W} = \mathcal{L}_g + \mathcal{L}_f + \mathcal{L}_H + \mathcal{L}_m \]

\[ \mathcal{L}_g = -\frac{1}{4} G^{\mu\nu} G_{\mu\nu} - \frac{1}{4} B^{\mu\nu} B_{\mu\nu} \]

\[ \mathcal{L}_f = \sum_i \bar{\Psi}_i (i\partial + g' W^a t_a + g B y) \Psi_i \]

\[ + \sum_i \bar{\Psi}_i (i\partial + g B y) \]

\[ \mathcal{L}_H = -(D_\nu \phi)^\dagger (D^\nu \phi) - \mu^2 (\phi^\dagger \phi) + \lambda (\phi^\dagger \phi)^2 \]

\[ \mathcal{L}_m = -\sum_{i,j} (c_{ij} \bar{\Psi}_i \phi \Psi_j') \]
The Soul as Holistic Cause

“Active Information”

- The wave equation of Quantum Chromodynamics governs possible behaviors in the field of the strong nuclear force:

\[
\mathcal{L}_{QCD} = -\frac{1}{4} F^{\mu\nu}_a F^{a}_{\mu\nu} + \sum_f \bar{\Psi}_f (i\gamma^\mu \partial_\mu - M + g_s A^a_\mu T^a) \Psi_f
\]

\[
F^a_{\mu\nu} = \partial_\mu A^a_\nu - \partial_\nu A^a_\mu + g_s f^{a}_{bc} A^b_\mu A^c_\nu
\]
The holy grail of physics has been to find one “unified field theory” to describe all the forces of nature. Stephen Hawking asked however: Even if there is only one possible unified theory, it is just a set of rules and equations. What is it that breathes fire into the equations and makes a universe for them to describe?
And along with this mystery we might pose this related mystery:

What tells the fire to obey the equations, to take on and maintain the shape or “form” of the equations?
In the late 1980’s, quantum physicist David Bohm and colleagues first suggested “active information” be elevated to the level of a new physical concept, alongside “matter” and “energy”.

“Active information” is what gives “form”; it “informs” mass-energy to behave in a structured way.

Many philosophers and scientists have since argued that the fundamental reality of our universe is matter/energy plus information.

David Bohm, 1917 - 1992
The Soul as Holistic Cause

“Active Information”

- Using our metaphor:
  - It is a “field” of “active information” that tells the mass-energy (the “fire”) to obey the equations of physics, to take on and maintain the shape or “form” of the equations of physics.

- More generally, “active information” is the “influence” that brings about the formation of structured patterns of behaviors at multiple levels:
  - at the quantum level (causes mass-energy to take on the “form” of the equations of fundamental physics)
  - or at the level of emergent phenomena of highly complex structures.
Nichols suggest the human soul is the embodied “active information” that “informs” or give form to every level of our body,
- from its subatomic particles,
- To our mental properties such as consciousness, self-awareness, and intentionality which “emerged” as the brain became more complex.

This human soul is not naturally transcendent or immortal (as Plato thought)
- According to the Christian Scriptures, only God and Christ possess immortality —
- ”It is he [Christ] alone who has immortality and dwells in unapproachable light ...” (1 Timothy 6:16).
The Soul as Holistic Cause

The Human Soul

- The soul becomes transcendent and immortal through a divinely initiated gift of a personal relationship with God.
- At some point in the gestation process, God establishes a personal relationship with the emerging human so that that person begins to develop within a transcendent, and not merely natural, horizon.
- The embodied soul, or whole person, grows and develops in self-awareness, skills, social relationships, knowledge, and wisdom over the course of a lifetime.
Conclusion: A Sacred Cosmos
The scientific revolution began with the view that nature was a great machine, obeying mechanical principles; it was regularly compared with a clock.

God came to be seen as extrinsic to nature. To act in nature, God had to intervene "from the outside".

There was no longer any inner connection between God and nature.
In our 21\textsuperscript{st} century world:

- Knowing we live in an 13.7 billion year old expanding, evolving universe, uniquely fine-tuned for life;
- Knowing that life evolved gradually on earth over 3.5 billion years through an interplay between chance and necessity;
- Knowing that human beings have evolved over 4.5 million years from ape like ancestors;
- Acknowledging that God is infinitely beyond all creatures;

How might we think of God as intimately present in our world?

How might we think of our cosmos as a \textit{Sacred Cosmos}?
A Sacred Cosmos

God and Nature

Nichols suggest the following:

- God as Being
- God as the Source of Information
- God as Context
- God’s Sacramental Presence
A Sacred Cosmos

God as Being

- What is it that breathes fire into the equations and makes a universe for them to describe?
- In other words: What holds everything in being?
- God is the breath that gives fire to the equations.
- God is Being in all its infinite fullness, and God’s holding of creatures in being is part of God’s act of creating.
A Sacred Cosmos

God as Being

- God is *actively* holding each creature, and all of nature, *in being*.

- God’s act of creation did not occur just once; it is *ongoing*, occurring *in every instant*.

- Being or existence is not just a static fact; it is radically dependent on God’s ongoing creative activity.

- God is therefore not a “stranger” to the natural world, but is actively united with it, continually holding it in *being*. 
A Sacred Cosmos
God as the Source of Information

- We can think of God as containing an infinite field of information.
- Many philosophers and scientists now view fundamental physical reality as:
  
  Energy +
  Form or embodied information

- God is the source of all “information” that gives “form”
In the mind of God exists all possible beings, events, and universes, including those that have not been created but could have been.

When God creates, some of these possibilities become actualized.

- God’s act of creating, as depicted in Genesis 1-11, is an act of forming the waters of chaos into an ordered world.

One of the ways God continues to interact in the world is through the input of information that specifies form.
A Sacred Cosmos

God as Context

- God is as the ultimate context of the universe.
- Everything that is familiar to us exists in some wider context.
- We exist in a society,
  - which exists within the larger biosphere.
  - The earth itself exists within the context of the sun and the solar system.
  - The solar system exists within the Milky Way galaxy,
    - which in turn exists within a supergalactic system.
- We also exist within social, historical, and cultural contexts, which influence our individual behavior.
We usually think of contexts as passive. But in fact, context is important because it can exert causality.

For example:
- natural selection, one of the primary forces driving evolution, is a form of contextual causation.
- context of our cultures clearly effects human behavior.

The contextual causality can be very subtle: a butterfly flapping its wings in Beijing will affect the weather in Minneapolis two weeks later because of the extreme sensitivity of weather to initial conditions (chaos theory; the “butterfly effect”)

Contexts are generally complex and nested.

God as the ultimate context of the universe and human life could act contextually unseen on multiple nested levels.
We can think of nature as a sacrament: it manifests something of the beauty, the majesty, and glory of God.

Modern people think of beauty as subjective — in the eye of the beholder.

Ancient and medieval people however thought of it as an objective quality in things themselves

- Beauty was the harmony of diverse parts in an ordered whole; a “unified diversity”

Physicists today often speak of the “beauty” of a theory.

- By this they mean mathematical beauty, concision, and elegance.
Ancient authors such as Plotinus spoke of beauty as having “radiance.”

- Beautiful things seem to radiate a splendor that transcends them.
- They mediate the presence of a greater reality that is beyond them and they draw us to that greater reality,
- This is precisely what “sacramental” means

Nature does not perfectly reveal God (as it will be in the resurrected state). It is an imperfect manifestation of the divine.

Nonetheless, Nature is “sacramental:” it really shares in and expresses qualities that exist in an infinite degree in its Creator.

Like a sacrament; it mediates God’s presence; it is:

A Sacred Cosmos
Sources of Graphics Used in This Series

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