

WitnessKit 2 *God and Creation*

Class 1:

Tests That Open Science to an Open Universe

Controversies can be both *scary* and thought-provoking.

Finding resolution
in controversy can be *satisfying*.
God and Creation is a hot controversy.
What background do we need
so that we can follow the debate about
creation, evolution, and intelligent design?
Can we learn the subjects well enough to satisfy
our own minds, rather than
depending upon the opinions of others?
Can we grasp ideas for an integrated worldview?
Can reason and faith fit together
about the origin
of the cosmos?

This course is a two semester primer.

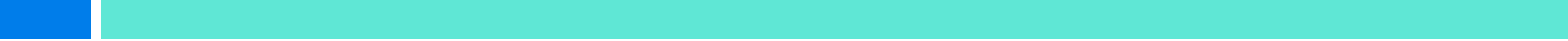
- This course starts with science. The author of our first textbook is the first “heretic” of “biological predestination.” (That was the name of a college textbook he wrote, before he faced his doubts about Darwinism.) We will use his high-school-biology-class level book—*Of Pandas and People*. This textbook is in the field of science.
- The course proceeds to an overview of what science has to offer, given its starting assumptions—leading toward the idea of God—*The Case for a Creator*. This textbook is a bridge between science and religion, starting from the direction of science.

This course is a two semester primer.

The course proceeds from the overview to look at the origin of human beings—the most critical question in the entire origins debate—*Bones of Contention*.

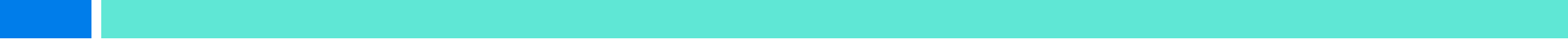
- Are we created in God's image, valued by Him,
- or are we an advanced animal species that emerged by chance
- from the time plus chance plus physical law of the universe?

The first semester,



For the most part,
goes from science toward religion.
We want to keep the fields
as separate categories
in our minds, even while
we build bridges from one to the other.
We use different tools
and reasoning skills in different fields.
The legal system demands that we keep
the fields as separate categories,
when we seek to address
legal issues.

During the first semester,



One class will be devoted
to integrating our worldview
from the other direction—
from the Bible toward science.

This two-way-bridge-building approach
should enable students
to read materials from all kinds of sources
and evaluate them,
whether a source is scientific or religious or both.

The second semester

- Of the course looks at legal aspects of the controversy. How do the definitions of terms and the legal precedent-setting court cases affect free speech? Or Hiring and firing? Or integrating worldviews?
- How are the public schools influenced, and the universities?
 - How does the reality of legal barriers affect the culture of the Western part of the world?

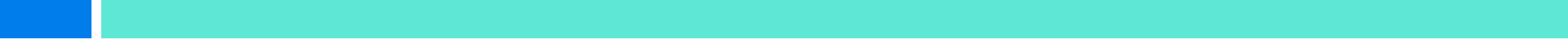
First Semester Textbooks

title	topic
1. <i>Of Pandas and People</i> by Percival Davis, Dean Kenyon, & Charles Thaxton	1. Information found in biology —a science supplemental textbook
2. <i>The Case for a Creator</i> by Lee Strobel	2. Starting with the assumptions of science , can we see evidence for God ?
3. <i>Bones of Contention</i> by Marvin Lubenow (second edition)	3. Is the human evolution story true to the evidence?

Second Semester Textbooks and additional DVD

title	topic
1. <i>Darwin on Trial</i> by Phillip E. Johnson	1. Legal language and the shape of the controversy
2. <i>The Wedge of Truth</i> by Phillip E. Johnson	2. Communication about the controversy
3. <i>Reason in the Balance</i> by Phillip E. Johnson	3. Effects of the court decisions upon culture
4. DVD <i>Expelled, No Intelligence Allowed</i>	4. Connection with hiring and firing discrimination

Class Format



Class slides summarize the topic of the day.

Homework questions follow.

Some homework is a Bible Study, and other homework is a textbook reading with questions. The homework goes back and forth between the fields of science and religion—practice in integrating the worldview.

Class Format

- The slides include ideas from the Intelligent Design movement—on the science side.
- The slides include ideas from the Bible—on the religion side.
- The course integrates the worldview of both science and enlightenment theism, because ***an integrated worldview is a good thing to have.***

Class Format

- The homework does not match the slides exactly. Rather, it “spirals” through the material, so that sometimes you will be working ahead of the slides, and other times you will review the slides in the homework.
- This method maximizes learning when covering new material. It is among the easiest ways to get new materials into long-term memory. We want to really learn these ideas—not just see and agree. We want to be able to share these ideas with others—so we need to actually learn them.

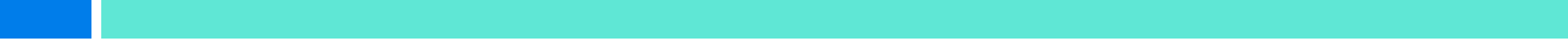
Additional Resources

Ideas from other resources are distilled into the slide discussions, such as

- mathematician William Demski's book *Intelligent Design*, and
- Granville Sewell's book *In the Beginning*, and
- Jonathan Wells' *The Myth of Junk DNA*, and
- Stephen C. Meyer's *Signature in the Cell*.

All of these books are fascinating and valuable sources—and the textbooks for our course are a good foundation for understanding them. They are a **step up** in difficulty from this course. Doing the homework will help prepare for that step up.

Additional Resources



- In the case of Dr. Demski's description of the math, our course elaborates and simplifies. He organizes his ideas a bit differently—but they are easier to express in words as our slides describe them.
- Some people are mathematically talented, and others need more words. We will go with words.



This course is about

Asking Good Questions!

We will ask many questions in the next 13 weeks.

Here is the first one...

Is God Intelligent?

If we arbitrarily define *God* as the *ultimate beginning entity*, can we demonstrate that God has mind?

Can we show someone else that God is not just an impersonal force?

God actually anticipated the question—Proverbs chapter 8 describes His answer.

Proverbs 8:11, 22, 27-31: MIND

¹¹ For **wisdom** *is* better than rubies, And all the things one may desire cannot be compared with her. Prov 8:11 (NKJV)

²² "The LORD possessed me (Wisdom) at the beginning of His way, Before His works of old. Prov 8:22 (NKJV)

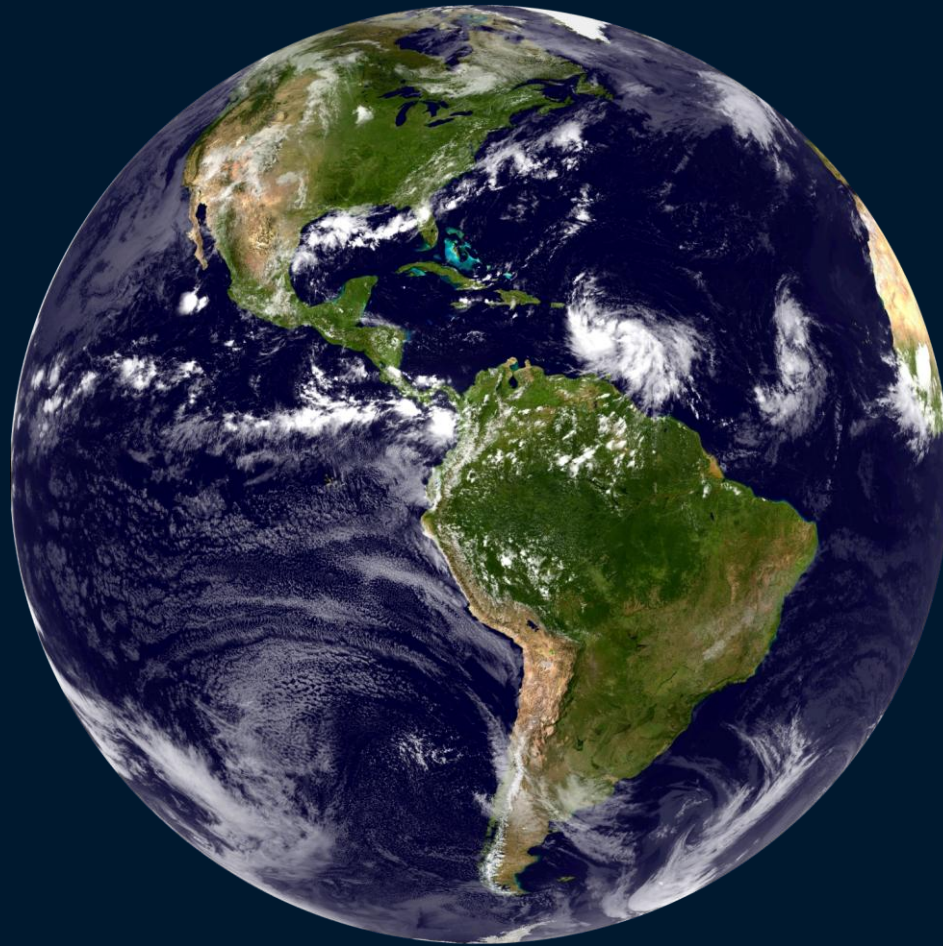
²⁷ When He prepared the heavens, I *was* there,

Proverbs 8:11, 22, 27-31: MIND

When He drew a circle on the face of the deep,
²⁸ When He established the clouds above,
When He strengthened the fountains of the
deep, ²⁹ When He assigned to the sea its
limit, So that the waters would not transgress
His command, When He marked out the
foundations of the earth, ³⁰ Then I was beside
Him as a master craftsman; And I was daily
His delight, Rejoicing always before Him,
³¹ Rejoicing in His inhabited world, And my
delight *was* with the sons of men. (NKJV)

<http://www.nnvl.noaa.gov/images/FDCfinal.png>

Do you see the circle on the face of the deep?



It is obvious that

Someone who deliberately created physical reality must have enormous wisdom. After all, we humans with all our wisdom could not do that. Why is modern science so hostile to this idea?

More Questions for the course: Why do scientists place

Science and religion in airtight separate compartments?

What is Intelligent Design?

Is it science? Is it religion?

Does it matter? The legal system says it matters, but does reality agree?

If Intelligent Design reveals objective truth, does category matter?

Evolutionist Richard Dawkins,

In the movie EXPELLED, says that he can consider **intelligent design** as an **explanation for the origin of life**, if it means space aliens brought life to Earth, but he could not allow any possibility that God might have had a role in design.

Dawkins seriously thinks it is **more scientific** to believe in the possibility of space aliens than in the possibility of God, according to an article called “An Intelligent Discussion about Life,” in *The Seattle Times*, April 17, 2008.

Richard Dawkins' Attitude

Shows the challenge we face.

Why does Dawkins think that?

Answer: Richard Dawkins honestly believes science must be conducted with the assumption of a strictly materialistic, closed universe, in order to be valid as science. He believes the methods of science demand that. We have good reasons to disagree.

To Disagree Intelligently We Must Consider Assumptions.

Why does science typically assume a closed universe?

- Because the tools of science, such as design of experiments that can prove an idea false, **assume** a direct link between natural cause and effect.
- They also **assume** that a scientist cannot test a hypothesis by conducting an experiment related to anything **outside** natural cause and effect.

The QUESTION OF ORIGINS

- Is a different matter—apples and oranges.
- The scientist does not design experiments to “watch random evolution happen from one species to another.”
- The theory of descent with modification— theorized to account for all the diverse forms of living things—is a HISTORICAL theory. It looks at historical data rather than laboratory data. It is **an inference to a historical explanation.**

The Assumptions Preset the Conclusions.

An assumption of cause and effect restricted to natural forces is reasonable for experimental design. Any surprises would be called anomalies. It is an unwarranted assumption when looking at historical information. It is an assumption that closes off inquiry and presupposes outcomes. If it is applied to origins, it is the same assumption as the belief that God does not exist, and the belief that miracles **never can** happen. It is a philosophical, faith assumption—faith in the absence of God.

Science requires a continuity assumption.

For science to discover scientific principles,

- it must assume a continuity between physical cause and effects.

When experimenters change the causes in a controlled environment, they expect their

- observations to confirm continuity
- between causes and effects.

They expect to discover the mechanism of that continuity by conducting many reproducible experiments.

In *The Signature in the Cell*,

- The basic continuity assumption of science is expressed as ***“looking for explanations we know about from the natural world and that we see operative in the present.”***
- Mentioning God in science violates that assumption, because we are **not** skilled to see God operating in the natural world in the present.
- However, if we restrict the explanation to **INTELLIGENCE as a cause**, we **do** see intelligence operative in the natural world in the present. Framing the discussion that way does **not** violate the continuity assumption.

Intelligent Design

Thus has limits, in that science dares not define the source of the intelligence in the design of nature—Because that would violate the basic continuity assumption. But science can identify intelligence! Perhaps science lacks the tools to define such an intelligence, but science DOES have the tools to identify intelligence as a cause.

Ruling out discussions of God in science class “works” for that definition of the continuity assumption—explanations including intelligence that we see operating in the present natural world.

Intelligent Design

- ❑ Ruling out intelligence as a cause goes too far and arbitrarily shrinks the continuity assumption. Ruling out **intelligence as a cause** is a closed assumption rather than an open assumption.
- ❑ For basic research, open assumptions are FAR better than closed ones.
- ❑ That assumption rules out undiscovered causes, for example, which makes research more static than it should be.

This is a Semantic Problem—and a vitally important one.

- This semantic problem can limit research and compartmentalize science and religion.
- When you realize that science today is arbitrarily shrunk by ruling out intelligence as a cause, you also begin to see the size of the **WALL** between the two realms of science and religion.

This is a Semantic Problem—and a vitally important one.

- ❑ Scientists are afraid to tear down that wall. They might lose their jobs.
- ❑ Because God really does exist, the wall is artificial. It needs to come down.
- ❑ For the sake of integrated worldviews, it needs to come down. Let's work on that.

Because the legal system

- Has hardened its definition of science to exclude Intelligence as a cause in the origins discussion,
- Official channels such as biology classrooms are censored areas.
- To understand the subject of Intelligent Design, a person has no choice EXCEPT searching OUTSIDE official channels.
- That search is important and valuable, and this course is a good place to start.

So the question REALLY Is,

- Do we have any scientific techniques for recognizing an “outside intelligent entity’s” historic activity? If we do, then applying those techniques IS appropriate for science.
- The answer comes to us out of chaos theory, a unique form of mathematical statistics. We will try to describe that answer.
- **Math is not religion.**
- Math is a tool of science.

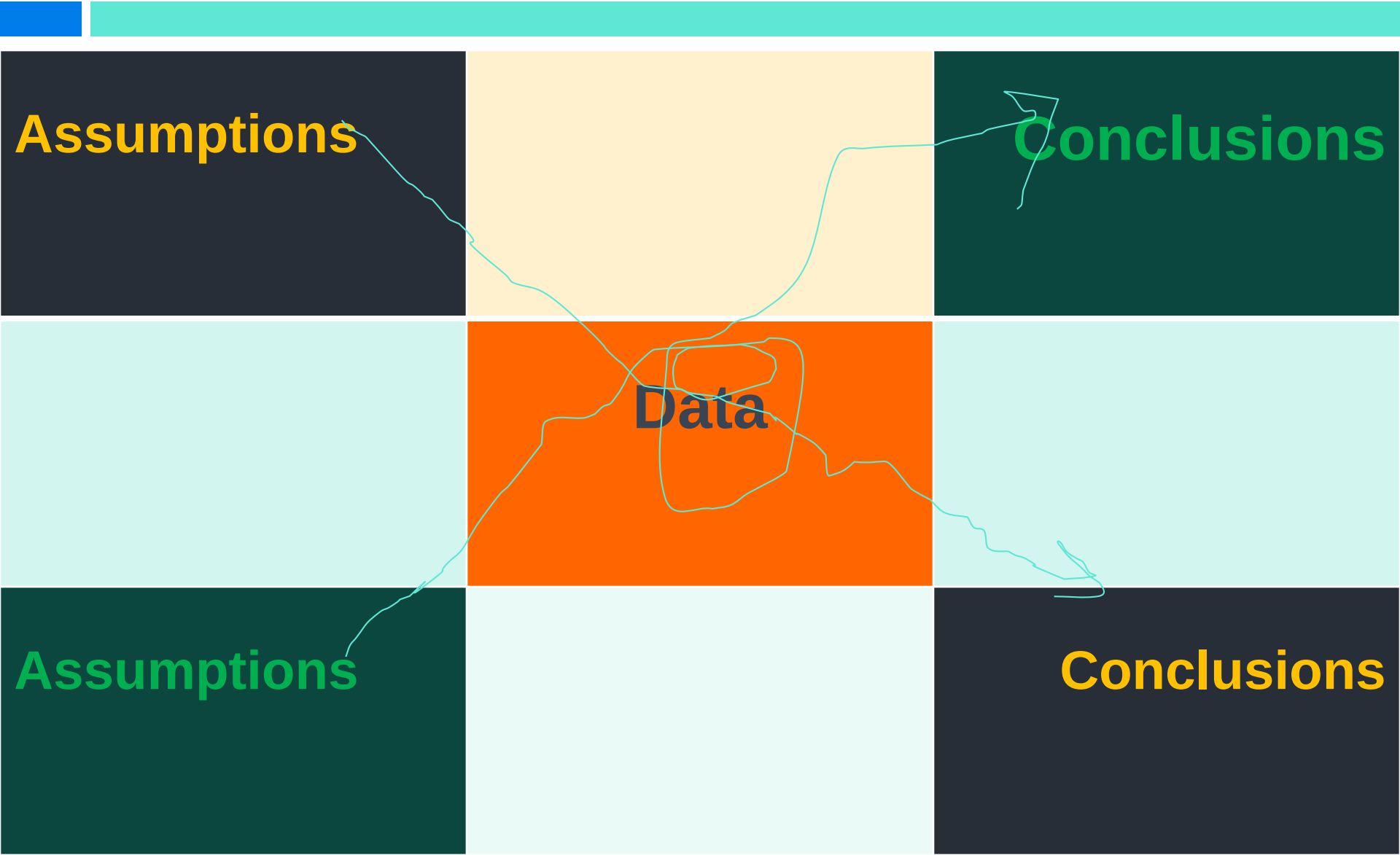
However, we have a little problem.



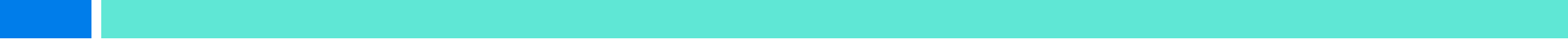
Almost all the data reported in the scientific journals was collected without recognizing even the possibility of the existence of an Outside Entity.

- Therefore, we must read very carefully when we study the conclusions of the scientific journals.
- If the possibility of identifying the imprint of Mind on matter were considered, the very same data might lead to different conclusions. Always try to see the data.

The Task Before Us for the Entire Study



We will start



with the data collected from science, and will look at that data in the light of the possibility of a Personal Beginning.

We will start from science and move toward faith.
Why do we want to do that?

This is an approach that should help Modernists find a path toward God.

Many people are convinced that science is about facts and religion is about feelings. Intelligence is factual, and it bridges gaps.

Science and Excluding The Middle Ground

Unguided atheistic evolution from molecules to humans	Criticisms of Evolution as currently explained	Intelligent Design Plus chance mechanisms	Theistic Evolution in terms of a hidden “guiding hand”	Old Earth creationists	Young Earth Creationists
The approach usually taught, and the only one allowed peacefully	“Impossible,” according to Gould, subject to massive political fights	Ruled illegal by the courts in Pennsylvania	Totally excluded by the courts	Totally excluded by the courts	Totally excluded by the courts

In the secular world, both Modernists and Postmodernists

Believe spiritual truth is only subjective, and cannot be found in an objective manner. This hides the REAL GOD. It throws everything religious into a sort of twilight zone.

- We can apply some tools of science to show that spiritual reality exists objectively—in the form of Mind prior to matter.
- For a modernist or postmodernist to find God, they need that pathway to be established.

We need a step by step approach

That will show the **math** which reveals

the possibility of Mind
behind the matter of the
physical universe.



The study of that MATH

Is called Intelligent Design. The
type of data it looks for is called
**Complex Specified
Information.**

We can see that Materialistic Naturalism is an unnecessary base for science

if we understand these ideas:

- 1 . Complex Specified Information implies an intelligent source.
2. Four new tests detect complex specified information.
3. These tests resolve a paradox which limited science.
4. These tests apply when science looks at the past.
5. The CSI tests allow an open universe to be considered scientifically.



Intelligent Design

Is the field of science
dedicated to the search for
complex specified information.

Idea Number 1: Complex Specified Information Implies Intelligence

First we must define Information.

Information is a decision code which gives matter its form or arrangement.

We could be more precise

By delving into different kinds of information as we set up our definitions. However, the kind of information that implies design or the presence of a MIND is the DECISION CODE style of information.

So we will keep this discussion simple.

The books that discuss this topic usually define information mathematically. The words, *decision code*, describe how the appropriate kind of information works.

Information is a decision code.

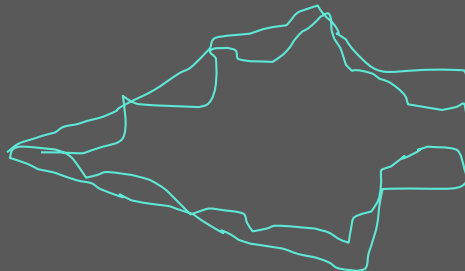
A simple example: Students read by learning the sounds that go with the shapes of letters on paper. The letters form a decision code. The mind of the student reads the code to decide which sound to speak.

- A writer decides which letters go on the paper, imparting information.
- The writer creates the information. The student reads it.

The appearance of design:

We often see an object that we automatically assume was made by a person or persons.

We see a rock made of flint in the shape of a flat triangle with the corners carved out, and with very sharp, serrated edges. We think: Someone made an arrowhead.



The appearance of design.

The overall shape is specific and rare in nature.

The edges are shaped for a purpose.

The carved out corners are shaped for attaching to an arrow by way of string.

The maker of the object followed a simple decision code as he decided how to chip each section.

We recognize human involvement because:

We recognize Complex Specified Information, or CSI.

We have an intuitive grasp of this concept. When we see the appearance of intelligent planning, we recognize an intelligent cause, even if we cannot see the cause.

Complex Specified Information

CSI is information that is complicated enough, and that matches an external, independent pattern

And the pattern is also obvious enough,

that when we see it, we automatically think a mind was involved in creating it.

We can use math

To define each of the ideas in the last slide.

The “complicated enough” idea can be defined as a **RARE EVENT**—something that is very unlikely to happen by law or chance. Math can also help us decide things about **the pattern**—whether it is obvious enough to count, whether it is **separate from the event and existed before the event**, whether it is **independent of the event by some connecting force or law**.

The intuition about a MIND's involvement is reasonable.

If the outside pattern and the rare event are actually independent of each other,

And yet they match,

- Mind is the bridge between pattern and event.
- By experience with objects people make, if **complex specified information** is present, an intelligence created the objects.
- Let's look at an example.

CSI—Complex Specified Information implies Intelligence

- Example: a player piano roll. Holes are punched in a roll of strong paper, and the information in those holes instructs the piano to play a certain song.
- The information is in the location of the holes, which can vary depending on where they are punched.
- A machine has to convert those holes in the paper into motions of hammers on strings.
- Another machine turns the piano roll.

Intelligence is in the creation of the piano roll, **not** the playing of it.

- It does not take much skill to play a song if the roll is instructing the keys.
- However, quite a bit of intelligence is involved in creating the piano roll.
- Would you expect a piano roll to happen by chance?
- Would you expect a roll punched by chance to produce a recognizable song?

When considering evidence for intelligence behind living systems

It is important to separate the “creation of the piano roll” from the “playing of the piano roll.”

Living systems appear self-perpetuating, like the player piano in motion.

- Living systems work based on the encoded information in the DNA and other structures of the cells, without the appearance of involvement from an outside intelligence at the time.
- The perpetuating nature of living systems does not exclude intelligence in writing the codes into the cell structures.

If we see complex specified information in living systems...

Intellectual honesty demands that we consider the possibility of an intelligence as a source of the information.

- The problem is **that science has been defined as** a search for naturalistic explanations.
- CSI resolves a dilemma and releases science from that constraint.

We can see that Materialistic Naturalism is an unnecessary base for science

When we understand these Ideas:
Number Two:

- 1 . Complex Specified Information implies an intelligent source.
- 2. Four new tests detect complex specified information.**
3. These tests resolve a paradox which limited science.
4. These tests apply when science looks at the past.
5. The CSI tests allow an open universe to be considered scientifically.

Intelligent Design

- Four different, independent requirements must be met to **know** an object or event had an intelligence which planned it.
- It is possible for an intelligence to plan the *appearance* of a random event.
- The tests miss such events. We may not be able to know, after the fact, that such an event was planned.
- The tests can fail to detect intelligence in another way.

Intelligent Design

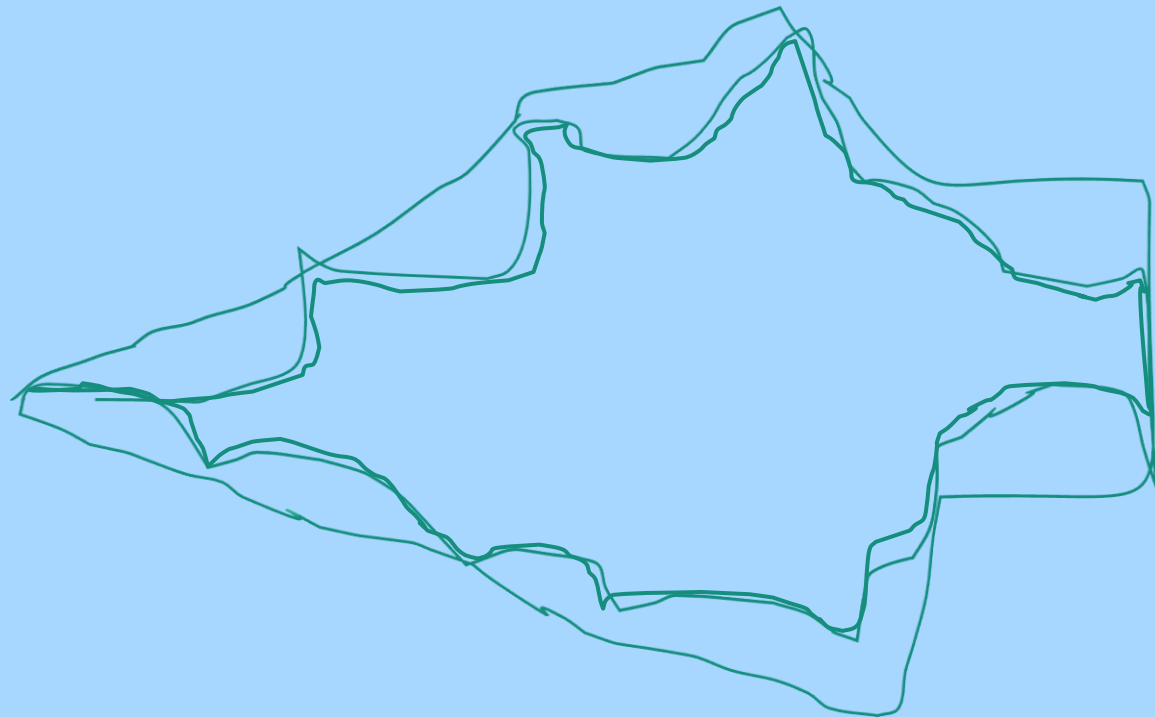
- The tests can be described statistically. The statistics are used to set a limit for the definition of “rare.” If you set the statistics with limits that are extremely tight, the math will miss events outside those limits.
- So the four requirements, when all met, detect **some**, but not all, intelligent planning.
- The tests fail by missing some intelligence, not by identifying too much intelligence.

Faux Randomness

- A person can paint realistically, like the Dutch masters, to convey an image.
- Alternatively, a person could paint deliberately to create the appearance of chance by throwing paint. In the latter case, the result might or might not look planned, depending upon the skill of the painter.
- In the first case, we would know that someone painted the picture. In the second place, someone could have framed a drop cloth. We cannot know the intentionality of the painting.

Here are the tests:

Designed object



CSI Test Number 1 of 4

A Contingent Event

CSI Detection Requirement

Number 1 of 4: a **contingent** event.

- The occurrence must be able to happen in more than one way. It must occur in a field of multiple possibilities. It cannot be “fixed in place” by physical law.
- I like to think of this as a “floppy” event. It is not predetermined, but can “flop” one way or another or another or another.
- It sounds more scientific to say ***contingent*** rather than floppy. But you can always *think* floppy.
- **This is different from ordinary English usage of the word *contingent*, which means “depending on something else.” Contingent means floppy, instead.**

CSI Detection Requirement

Number 1 of 4: a **contingent** event.

- If someone sits at the keyboard of a player piano and plays, she can play any number of different ways.
- If the piano roll is causing the sound, the song is **fixed at one possibility**, and the person on the piano bench is not using intelligence to plan the next note.
- The **creation** of the piano roll met the contingency requirement, but the **playing** of the roll does not.

Some things in nature are not contingent. They are determined.

- A salt crystal of sodium chloride is always in the ratio of one sodium ion to one chloride ion, and with a specific crystal shape.
- The shape of the salt crystal does not match the contingency requirement.
- If you add more ions to the solution, you get more of the same kinds of crystals. The repeating nature of inorganic crystals does not meet the contingency requirement.
- (Ideas about the origin of the first living cell that involve crystalline repetitions DO NOT meet the contingency requirement for development of information. Inorganic chemistry is not information-driven.)

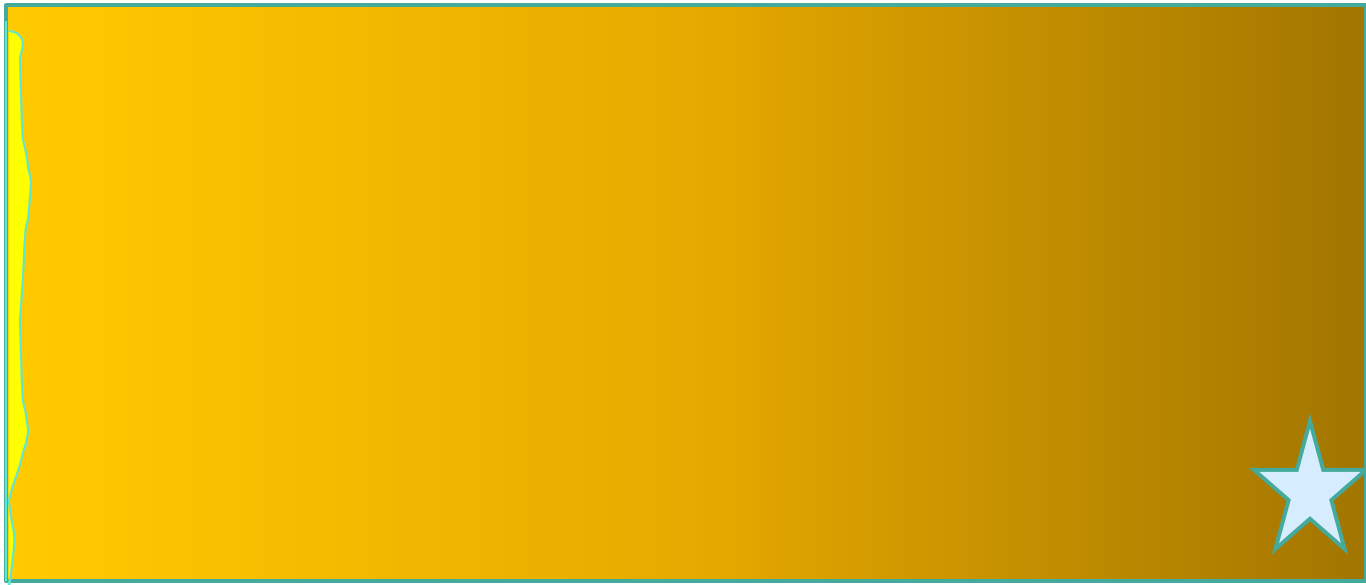
Map of Physical Law, Chance, and Independent Pattern, where P stands for probability.

Physical Law

$P=1$ Determined events

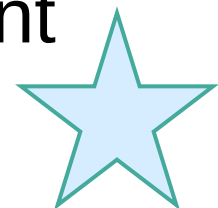
Chance

$P \rightarrow 0$



Info

Independent
Pattern



CSI Test Number 2 of 4

A Rare Event

Map of Physical Law, Chance, and Independent Pattern

Physical Law

$P=1$

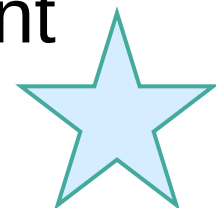
Rare Chance

$P \rightarrow 0$



Info

Independent
Pattern



Detection Requirement

Number 2 of 4 : **Improbability**

To find intelligence behind an event, it must be **improbable** for happening by chance. It's probability for happening by chance should be near zero. (An intelligence could plan a likely event, but these tests would not notice that intelligence.)

- Regarding detecting intelligence in **biology**, Dr. William Dembski sets the “rareness” boundary at 10 to the minus 150th power.
- If an event has a lower than 10 to the minus 150th power probability of happening by chance, it is extremely improbable.

Detection Requirement

Number 2 of 4 : **Improbability**

This boundary of 10 to the minus 150 th power represents

- ▣ the number of elementary particles in the universe
- ▣ and the predicted number of seconds from the Big Bang to the heat death of the universe
- ▣ and the fastest possible rate of particle transition.

So if something is less likely to happen by chance than one time in the entire past and future history of the universe, that is a REALLY RARE event.

Detection Requirement

Number 2 of 4 : **Improbability**

- **If** an occurrence is less likely to happen by chance than one time in 10 to the 150th power opportunities,
- **And** it matches an external, independent pattern,
- **Then** it is a sufficiently rare occurrence to be considered as signifying Intelligence as a source, according to Dr. Demski.

If we look at one protein...

If that protein utilizes 20 different amino acids and forms a chain 100 amino acids long (short for a protein)...(assuming you have the amino acids available)

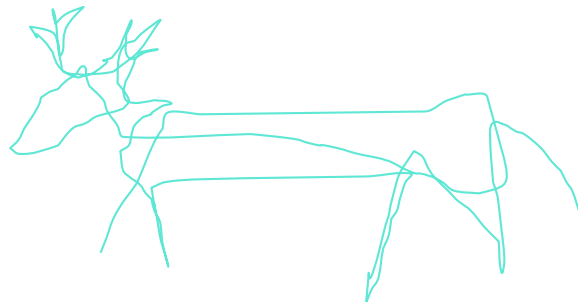
- The odds of that exact order occurring strictly by chance would be
 - 1 chance in 20 raised to the 100 power
- Or one chance in 10 raised to the 130 power.
- If we allow for variations in that chain which do not change the way the protein works, then the odds improve to 1 in 10 raised to the 65.15 power.

Cells have 500 or more enzymes

- Which are themselves different proteins.
- Cells also have much more complicated structures than proteins, such as DNA and RNA and mitochondrial DNA.
- Improbabilities multiply. When highly improbable chemical structures must interact with other highly improbable structures, the interaction probability multiplies to an even smaller fractional probability.
- So we can see that within the chemistry of a single living cell, we are already within Dr. Demski's limits for considering intelligent design.

Example for an Improbable Event

- We look at an object, such as a cave painting. It might represent an animal or a mere discoloration in some rocks. How do we determine whether a human intelligence was involved in the planning?



Example for Number 2:

Improbable Event

- For a cave painting, we can determine intelligence without being nearly as strict as 1 chance in 10 to the 150th power chances. But cave paintings are still very rare and unlikely to happen by chance.
- So we can recognize intelligence at less strict probability levels than Dr. Demski's, and we can be sure that we are right.

Detection Requirement 2:

Improbable Event

- Dr. Dembski sets this bar very high for biological systems to make certain to consider only the definite appearance of design in nature, since materialist science denies all intelligence outside a closed universe.
- Of course, this means the criterion misses huge numbers of opportunities to consider intelligent planning in biology.

CSI Test 3 of 4

An Independent Pattern that
Matches

Map of Physical Law, Chance, and Independent Pattern

Physical Law

$P=1$

Chance

$P \rightarrow 0$



Info

**Independent
Pattern**



Mind Is the Bridge!

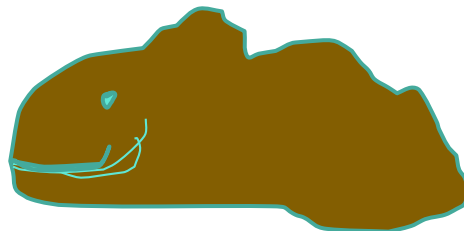
- **Mind is the bridge we know about between an event and an independent pattern.**
- **In fact, we don't know about ANY OTHER such bridge.**
- A couple of things must be true about the pattern for the mathematical test.

Detection Requirement number 3 of 4: Independent pattern matches.

- The pattern cannot have been added after the event. The pattern **has to exist prior to the object or event.**
- (The blobs of discoloration in a cave would need to look something like an animal or an identifiable object, or we would think it was not a painting. The animal shape is the independent pattern.)

Detection Requirement number 3 of 4: Independent pattern matches.

- Also, it would be important to know that nobody came and added paint to make the shape more obvious.
- And it would be important to know that no one invented a new “mythological animal” in the shape of the blob.



Detection Requirement Number 3:

An independent pattern

- The piano roll example has an event: the song the piano is playing.
- It has a decision code: the holes punched in the roll of paper.
- It has an independent pattern: the sheet music is the pattern that represents the notes the piano is to play. That pattern will vary depending on the selection of the song.

Detection Requirement Number 3:

An independent pattern

- That pattern of holes selected for the piano roll is a code that is not created during the construction of the piano.
- The decision code is completely independent, and the sheet music was written by someone entirely different from the people who built the piano.

Detection Requirement Number 3:

An independent pattern

- If we came upon a player piano in the middle of a desert playing “A Bicycle Built for Two,” we would not think that song and piano happened by chance.
- We would rightly believe someone with intelligence built the piano, and someone else wrote the music.
- We might question the intelligence of the person who left the piano in the desert, playing away:)

CSI Test 4 of 4

The Pattern is OBVIOUS and pre-existent.

Detection Criteria Number 4 of 4:

An **Obvious** pattern

- The pattern has to be obvious enough that the pattern itself is not just a chance occurrence, and also obvious enough not to have been added after the fact of the event to match the event.
- A cave painting that looked like a wobbly oval could just as easily be a chance discoloration.

Detection Criteria Number 4 of 4:

An **Obvious** pattern

- A newly “found” mythological creature that looks just like the discoloration would not count, either.
- Mathematics has at least one way to test for the independence of the pattern and the event.
- **If the pattern matches the edges of the event too exactly, it could have been added after the event as a “made up” pattern.**

Granville Sewell's book *In the Beginning and Other Essays on Intelligent Design*

Reports that a pattern is obvious if it can be described in a short sentence or description*, including short mathematical sentences.

The star shape in our diagram is a pattern, having five equally spaced points and a flat, closed shape.

CSI Detection Requirements 2, 3, & 4 Are Mathematically Rigorous.

- There are separate mathematical tests to rigorously find out whether the pattern is obvious and independent, as well as to predict the likelihood of an event.
- These tests were developed in the statistical studies called chaos theory.

When these four CSI tests are met--

intelligence is involved in the creation of the information which set the course of the event.

1. An event that could have happened multiple ways, and
2. Which is a rare event, and
3. Which matches an independent pattern,
4. Where the pattern is also obvious and preexisting.

We can see that Materialistic Naturalism is an unnecessary base for science

When
we
under-
stand
these
Ideas:
Number
3

- 1 . Complex Specified Information implies an intelligent source.
2. Four new tests detect complex specified information.
3. These tests resolve a paradox which limited science.
4. These tests apply when science looks at the past.
5. The CSI tests allow an open universe to be considered scientifically.

These tests resolve a paradox which limited science.

Modern science uses repeatable testing to demonstrate whether an idea is valid.

Experiments are designed

- to be repeatable and
- to demonstrate cause and effect, and
- to eliminate extra factors that might interfere with cause and effect.

These tests resolve a paradox which limited science.

- Sometimes the experiments are *thought* experiments related to events in the past, but even these must assume repeatability and predictability.

Science's methodology has limitations.

- In general, Experimental Science is limited to matters that are subject to repeatable tests,
- or for which assumptions of repeatable, predictable behaviors are reasonable.

Science's methodology has limitations.

- That means that **singular events** which are **not** repeatable or predictable fall outside the realm of science. This includes such things as miracles.

Science's methodology has limitations.

- It is not reasonable
 - ▣ to set up a scientific experiment and demand that God cooperate by doing a miracle,
 - ▣ and expect to achieve repeatable results—other than likely failure to see a change.

The Bible Suggests that

- Personal prayer experiments **are possible**, but they require meeting rigorous demands.
- The individual must have a clear conscience before God.
- The prayers must be in keeping with God's character and wishes.
- The prayers must be prayed in faith.
- Example prayers like this in the Bible often relate to crises where lives are at stake.

Experimental prayer:

- We have the Biblical example of Gideon in the book of Judges, who did such an experiment, and God did cooperate, repeatedly.
- But that was a special situation because God initiated the situation. God wanted Gideon's cooperation, and He demonstrated His communication by answering repeated testing prayers.

Limitations of Science: Early Modern Science

During the time when modern science was developing, the possibility of creation of the universe—by an entity outside of the universe—

- Was assumed to be in the category of “things science cannot test.”
- Method defined the field.
- Thus science came to the place of being defined as a search for natural explanations.

Limitations of science

- Early in the history of modern science, scientists realized that the origin of the universe was outside the realm of science experiments, and thus should **not** be discussed in science.
- Science accepted a naturalistic methodology with a limited scope of application.

Limitations of science

- Then science took a wrong turn by expanding the discussion to origins while excluding the possibility of looking for evidence of creation processes.
- Darwin's theory—of descent with modification to produce the totality of living species—opened the possibility of seeking evidence for natural causes in origins. The theory does not rule out the possibility of causes beyond nature, however.

Limitations of science

- Even though creation is not a lab experiment, it can leave evidence of occurrence in the past.
- Materialistic Scientists extrapolated physical methodology into the metaphysical realm without appropriate tools.
- They used methodology to exclude the possibilities their methods could not detect. This is a flaw in logic and a serious flaw in scientific technique. It restricts science to static technology.

Limitations of science

- Basically, correct science had two valid choices.
 - It could limit science to natural explanations and restrict it from looking at origins.
 - Or it could open science to explanations beyond the natural based on evidence, and look at origins, with a caveat that the techniques to study such evidence were not available at that time.

Limitations of science

- It could not look at origins restricted only to natural explanations, because that eliminates the most probable explanations.
- The problems of origins with the first law of thermodynamics—essential to all physical science—make the closed universe assumption unreasonable. The first law implies the eternality of the sum of matter and energy from eternity past—but the Big Bang says that is not the case.
- Unfortunately, science took the wrong turn.

The CSI tests resolve this paradox.

- The CSI tests make intelligence detectable using scientific and mathematical tools.
- Biological systems involve information.
- The CSI tests can be applied to biological systems.

The CSI tests resolve this paradox.

- Those tests make SOME past creation processes accessible to scientific identification and mathematical description.
- They eliminate the need to define science as a search for natural processes—and they imply that the action from some Entity outside the universe is a rational possibility.
- This OPENS science up to the possibility of an open universe.

We can see that Materialistic Naturalism is an unnecessary base for science

When
we
under-
stand
these
Ideas:
Number
4

- 1 . Complex Specified Information implies an intelligent source.
2. Four new tests detect complex specified information.
3. These tests resolve a paradox which limited science.
- 4. These tests apply when science looks at the past.**
5. The CSI tests allow an open universe to be considered scientifically.

The CSI Tests are appropriate for looking at the past.



- ❑ The CSI tests apply to archaeological artifacts.
- ❑ The CSI tests DO apply to singular events in limited terms—identifying the imprint of intelligent causes.
- ❑ They are the right tools for extrapolating farther back into history based on data in the present.
- ❑ If we find that CSI tests are true for biological systems, it is intellectually dishonest to **exclude** the possibility of MIND in the design of the systems.

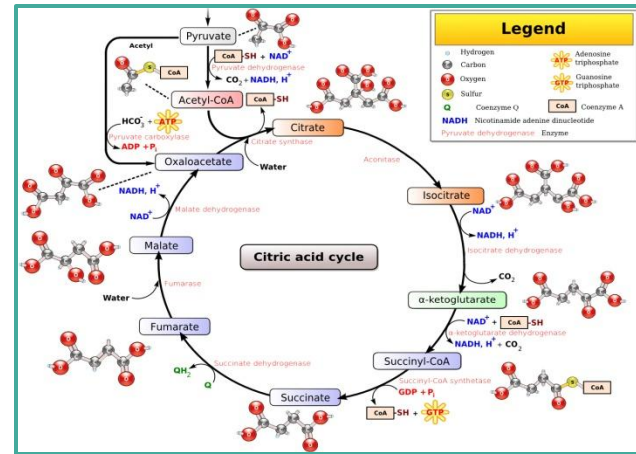
The CSI Tests are appropriate for looking at the past.

- The tests are already used either formally or informally in various fields such as code breaking, archaeology, forensics, the search for artificial intelligence (SETI), and data security.



The CSI Tests are appropriate for looking at the past.

- Biological systems carry information from the past into the present.
- The CSI tests can apply to biological systems –
- Within the limited terms of looking for the imprint of intelligent causes.



How are Bio Systems like the player piano?

- The player piano makes music without a person at the keyboard, because the information in the piano roll selects the notes.
- A person had to be involved when the code was set into the piano roll, however.
- Bio systems “run” without a person obviously making the cellular systems go.
- But a Mind had to be involved in setting up the codes, according to the math.

We can see that Materialistic Naturalism is an unnecessary base for science

When
we
under-
stand
these
Ideas:
Number
5

1. Complex Specified Information implies an intelligent source.
2. Four new tests detect complex specified information.
3. These tests resolve a paradox which limited science.
4. These tests apply when science looks at the past.
5. **The CSI tests allow an open universe to be considered scientifically.**

The closed universe assumption...

- Was historically based on limitations in scientific methodology.
- The CSI tests remove some limitations.
- The removal of those limitations eliminates the need to assume a closed universe.
- The CSI tests allow the imprint of mental activity as a source of information to be detectable, even at the time scale of biological origins.



A starting point for thinking about
CSI in biology...

Is the origin of the first living cells.

We know that living cells are full of information.

- Some information exists in the DNA and RNA codes that govern protein synthesis.
- Some information exists in the cells that form embryos, which direct the differentiation processes—we know that from cloning experiments.
- Some information is observable in the molecular machines that work within living cells.
- Inorganic chemistry is statistically-driven.
- Cellular chemistry is information-driven.

We know that living cells are full of information.

- When cellular chemistry switches from information-driven chemistry to statistically-driven chemistry, we recognize that event as cell death.
- We expect that to be a one-way street. We do not expect the chemistry to switch back to information-driven chemistry after cell death. We don't know how to put all the information back and make it work, after raw chance takes over.

A horizontal bar at the top of the slide, divided into a blue section on the left and a teal section on the right.

How did the information

Arrive within all cells?

Pasteur disproved spontaneous generation.

- ❑ Pasteur proved that life does not spontaneously generate from non-life.
- ❑ A strictly materialist origin of the first cell demands that Pasteur be wrong, at least once.
- ❑ One common evolution story about that first cell claims that the right chemicals formed in a coacervate in the ocean near a volcano.

Coacervates

Evolution's story about the origin of the genetic code says that inorganic structures called coacervates developed near volcanoes in the ocean, and became little proto-cells for the beginning of life.

The ocean and volcanoes are required to have any chance at all of the right chemicals' being present.

But what in real life IS a coacervate?

Coacervates: “Structures from randomness”

- If you place a pot of water on the stove and heat it very slowly, and I emphasize slowly, the surface will sometimes show a “beehive” shape of hot and cold spots at the surface.
- Soap bubbles have a natural structure, and cell membranes have some similarities to soap bubbles—although in a much more complex form.
- Scientists claim coacervates are a similar “structure” that could contain chemicals on the ocean surface.
- What happens to the surface of the water on the stove if the water becomes turbulent? Or to soap bubbles over time?

Coacervates

- ❑ The laminar heat transfer “structures” on the surface of the water break up and mix. They disappear.
- ❑ Another example of a natural structure is a soap bubble. Cell membranes are much more complicated than soap bubbles, but do share some of their chemical characteristics.
- ❑ Do soap bubbles last for millions of years so that extremely unlikely chance chemistry can occur?

Coacervates

- ❑ What do you think would happen if a volcano erupted near the ocean?
- ❑ Would the ocean water be in laminar flow or turbulent flow?
- ❑ Would coacervates ever exist in such a situation?
- ❑ If they existed, would they stay that way for long?

Coacervates

- The volcanic eruption is necessary because of the need for a reducing atmosphere with specific gases, and without the presence of oxygen. Gases spew from the volcano and displace oxygen.
- Oxygen prevents the life-supporting reactions from happening.

Even if the right chemistry was present to allow Coacervates to form, they would be transient.

BECAUSE a volcanic eruption near the ocean would not produce laminar flow in the ocean surface.

- It would produce turbulence.
- The volcanic gases would not stay in place very long, either.
- When oxygen is present, amino acids do not form from chance chemistry.

Dr. Stanley W. Fox

Worked in the laboratory to create coacervates in the following series of steps.

1. Heat DRY amino acids at 160 to 180 degrees Celcius for several hours with no oxygen present but in a nitrogen atmosphere. The amino acids will link together in chains called “proteinoids.”
2. Dissolve them in boiling water.
3. Cool the water.

Dr. Fox's results

- The cooled chains of proteinoids fall out of solution (when they are in excess of the amount that can dissolve at that temperature) and they clump together to form tiny hollow spheres.
- Dr. Fox then envisioned a scenario with a volcano erupting near the ocean to mimic those conditions. He assumed the process of going from proteinoid sphere to living cell would take millions of years, but that the original spheres could form in a few hours.

This brings up some questions?

- How robust are such spheres? Could they last for millions of years?
- How do they function in comparison to cell membranes? Would they allow chemicals to flow into and out of the spheres?
- How would the spheres capture appropriate chemicals for life processes? Where would those chemicals originate?

Is a coacervate information?

- All this theorizing doesn't even get to the question of INFORMATION—this is just to establish a blob where the right chemicals might be present momentarily.

Other theories, Other locations

Other theories about the beginning of the first cell have the same problem. The theory placing the origin in the deep oceans near underwater vents, with sulfur as the energy source rather than oxygen, also has problems explaining how the appropriate chemicals could **stay in place** for long spans of time in order for cellular chemistry to begin.

No theory explains how the switch from chance chemistry to information-driven chemistry began.

- If we put the correct chemicals in a bucket, we would **not** expect life to spontaneously arise.

The materialist evolution story

- Is not very convincing at the point of creation of information in the first cell.
- New theories are being developed all the time, but they all have serious limitations without a Mind to direct information into chemistry.

Job 38:36

- ³⁶ Who has put wisdom in the mind? Or who has given understanding to the heart?

Class 1 Homework Set 1:

- Devotional Section: Read Genesis 1:1 to 2:3 and outline the day by day categories of creation. See if you can separate facts from poetry.
- Evidence for Biblical Truth in regard to the Beginning: What reasons beyond blind faith do you consider, toward belief that God is our Creator? This is a foundational issue that affects all other aspects of religion. We looked at philosophical reasons for a Personal Beginning when we studied HE IS THERE AND HE IS NOT SILENT. Now we want to look at the limits of secular science and its evidence, to see if the Biblical accounts are within reason.

Class One Homework Set 1:

Textbook section: Read the Introduction to OF PANDAS AND PEOPLE. What is the goal of the book?

Would you describe the goal of the book as religious? Why or why not?

In the example of ripples in beach sand and the words, “John loves Mary” written in sand, how did the book describe deciding whether it was

- a chance cause for the ripples or not, and
- a mind behind the writing or not?

Class One Homework Set 2:

- Devotional Section: Read Psalm 100.
- What are some of the implications for our lives if God is our Creator?

Textbook Section: Read “Overview Section One” in OF PANDAS AND PEOPLE.

- Is common sense good enough by itself to decide the origin of life?
- How long did science require to dispel the idea of spontaneous generation?

Class One Homework Set 2:

- How does the theory of evolution address the idea that life arose from non-life?
- Is this a form of belief in spontaneous generation?
- Does this mean science has actually dispelled the idea of spontaneous generation, or simply transformed it into a long-term process?
- If spontaneous generation does not happen quickly in a laboratory under controlled conditions, is there good reason to speculate that it happens slowly over millennia?

Class One Homework Set 2:

Define

- Coacervates:
- Reversible Reactions:
- Racemic Mixtures:
- Cross Reactions:

Class One Homework Set 3:

- Devotional Section: Read Proverbs 8:22-36. The speaker in this chapter is a personification of Wisdom. How do you think wisdom is related to intelligence? If God had Wisdom before His creative acts, does this imply intelligence or Mind as one of His primary characteristics?

Textbook Section: Read Excursion Chapter One in OF PANDAS AND PEOPLE.

- Why did Miller and Urey eliminate oxygen from their experiment?

Class One Homework Set 3:

- Does the earth's geological record reveal any evidence of an oxygen-free atmosphere on earth in the past, or any evidence for the postulated "pre-biotic soup?"
- If Miller & Urey's experiment is supposed to represent pre-biotic evolution, but no evidence exists for the existence of similar conditions, is this experiment convincing as an explanation for the way early life began?
- How did Miller and Urey concentrate their reaction products to collect measurable amounts of organic compounds?

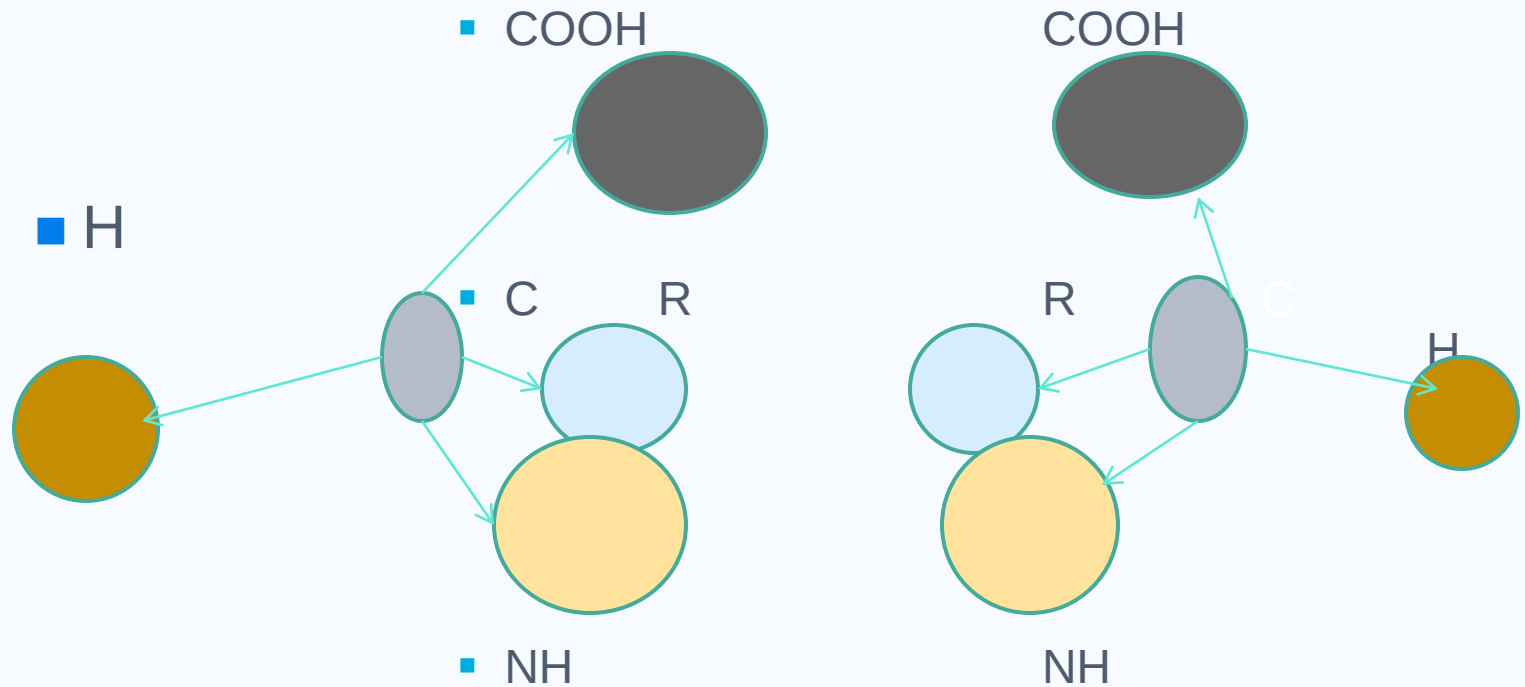
Class One Homework Set 3:

- In the primitive ocean environment, would ocean waves tend to concentrate reaction products or disperse them?
- If such reactions took place in nature, would the reaction products be likely to remain together to form coacervates?
- All inorganic reactions automatically produce racemic 50-50 mixtures of compounds that exhibit “handedness” or “mirror image forms.” Amino acids are mirror image molecules. What is the problem with racemic mixtures as precursors to living cells?

Mirror Image Molecules

H=Hydrogen,
C=Carbon, COOH= carboxylic acid group,
R=hydrocarbon chain, NH=amine group

A Generic Amino Acid



Class One Homework Set 3:

- What is the enzyme problem within the inorganic to biochemistry interface?
- What did Fox conceptualize as intermediates between the proteins such as living cells use and the amino acids which inorganic chemistry can produce? What are some of the problems with his ideas?
- How many enzymes are needed in a typical living cell?

Class One Homework Set 3:

- If the 500+ different enzymes in a cell averaged only 100 amino acids in length—which is shorter than the real average—how many DNA letters in exact sequence would be needed to produce them?
- For merely one protein of 100 amino acids in sequence, how many possible alternate random sequences are there? $100! = 9.33 \times 10$ to the 157th power (from the CRC Math Handbook tables) Therefore, if one had a “soup” of only the correct amino acids in only the correct proportions, and if they assemble by chance into a 100 sequence protein, what are the odds of producing the specific 100-sequence protein that will work for a specific application, assuming random chance is the only operational principle?

Class One Homework Set 3:

- What would the chance be of producing 500 specific proteins that a single cell needs to operate in one drop of coacervate that formed from a volcanic eruption followed by a rainstorm?
- Suppose the experimenter decides to “cheat” and have all the 500 correct proteins already formed in a drop of liquid, and he brings a tub of ocean water into the lab, and then drops his artificial coacervate into the water. Would you expect a living cell to form?
- Is there a big gap between a coacervate and a living cell?

Class One Homework Set 3:

- Define “specified complexity.”
- Which of the following examples exhibit specified complexity? a. A computer, b. an assembly line, c. a volcano, d. Butterfly migration, e. a beehive, f. a living cell. g. A library, h. a ball point pen.
- According to our observations about the above list, does specified complexity require the existence of a mind or minds to create the organization?

Class One Homework Set 3:

- Inorganic chemistry involves random collisions of molecules.
- Biochemistry involves folded geometry of molecules coupled with specific enzymes. The geometry and surface charges of the enzymes must fit the other molecules precisely. Life chemistry is fundamentally different from inorganic chemistry in concept. Life chemistry is multi-dimensional and elegantly executed, almost like a chemical dance of 6 dimensional puzzles—3 spatial dimensions and 3 forms of surface charges.

Class One Homework Set 3:

- The living cell within a higher organism exhibits layer upon layer of specified complexity, from the most basic level of biochemistry to its organization within tissues and organs, to specification of its activity from outside the cell in its brain or endocrine system.
- Its development during gestation into its functional form also is a transition that exhibits specified complexity. Its mitosis into replacement cells also exhibits specified complexity. **Each layer of specified complexity makes a random explanation exponentially less likely.**

Class One Homework Set 3:

- By analogy, the more complex and layered in processes something manmade is, the greater the intelligence in planning that is required behind it. Production of a computer requires more intelligence and precise design than production of a brick. Because the analogy holds for living systems, the Mind that designed them must have great intelligence indeed.
- The more layers of complexity and precise interaction, the more likely a designer was involved in production.
- When specified complexity is observed, can a mind or minds behind it be ruled out?
- How is it possible to call the Miller-Urey experiment an example of intelligent design at work?