GOD'S CRIME SCENE

J. WARNER WALLACE

The Origin of Life

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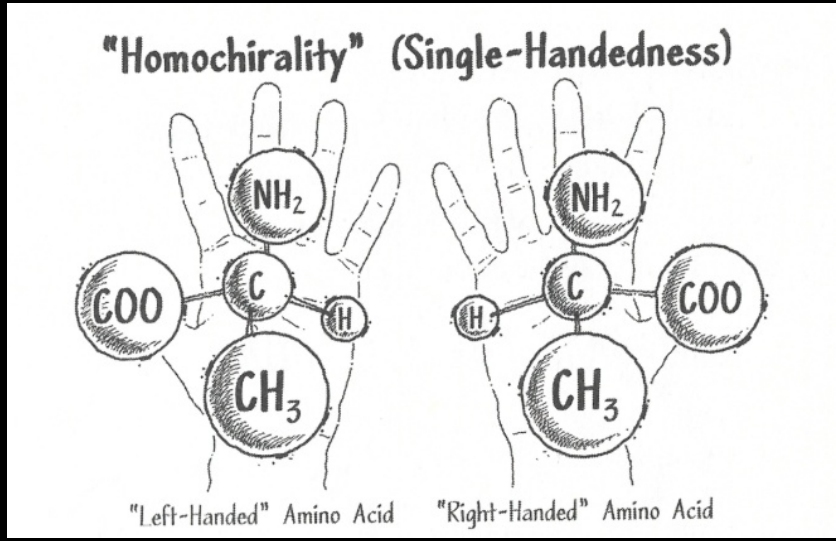
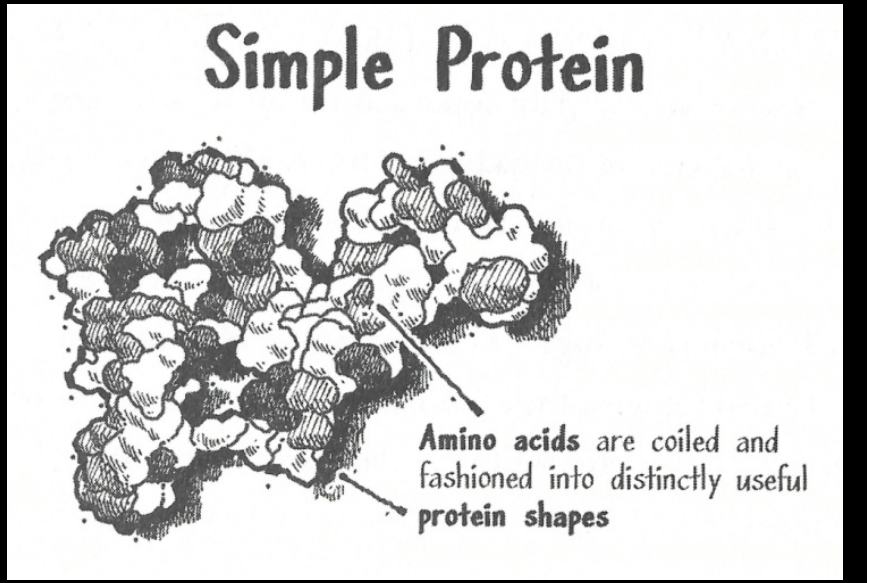
Steps to get life:

- Carbon atoms (the base of life) are used to make 2 important compounds – amino acids and nucleotides.

- When these compounds are formed, they have a "handedness". In order to make proteins out of amino acids, they all need the same handedness (homochirality).

- Amino acids combine to form proteins. There are 3 types:
  - *Structural proteins* - build the structure of a cell.
  - *Functional proteins* - carry out tasks within the cell.
  - *Regulatory proteins* - regulate chemical reactions within the cell. These are also called *enzymes*.





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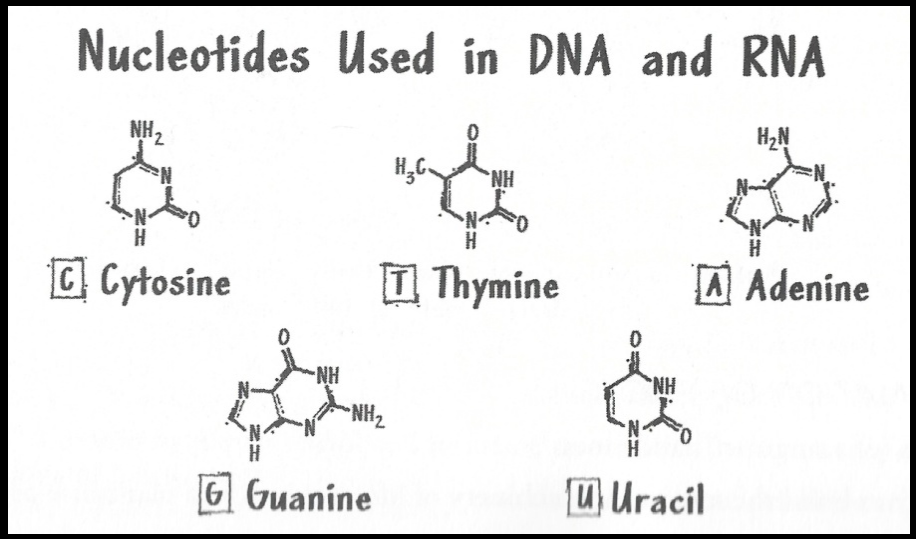
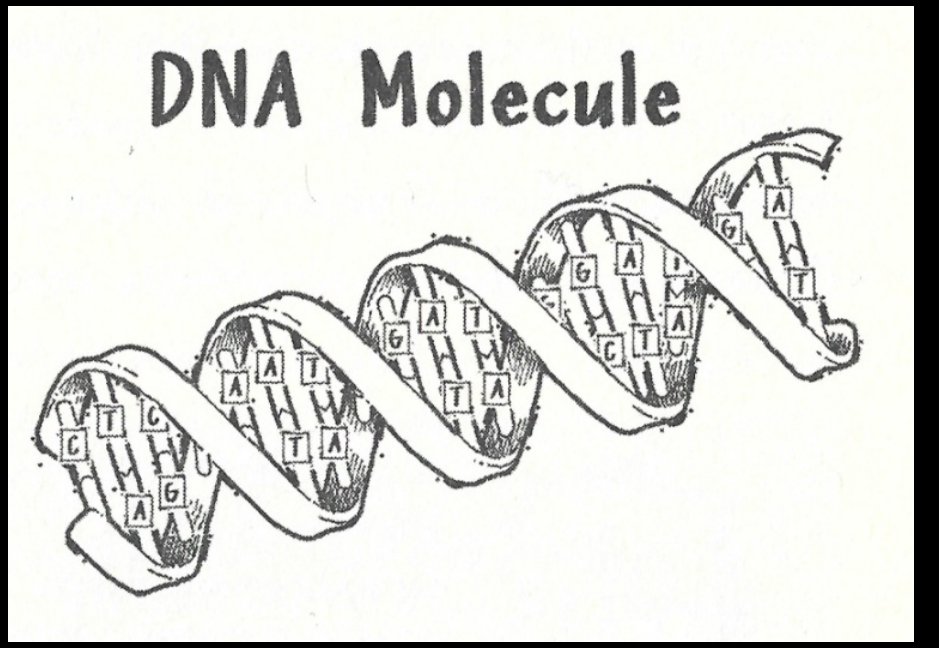
Steps to get life:

- Nucleotides combine with phosphates and sugars to form various nucleotide bases (A, C, G, T, and U).

- These nucleotide bases are then joined together into a very long chain called nucleic acids.

- The 2 nucleic acids we're going to look at are DNA (deoxyribonucleic acid) and RNA (ribonucleic acid).





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Steps to get life:

- The nucleotides of DNA form a code - the master plan for the organism. The information in the DNA provides the instructions to make **proteins**.

- Functional **proteins** unzip part of the DNA molecule. More proteins start assembling a strand of mRNA (messenger RNA) according to the code in the DNA.

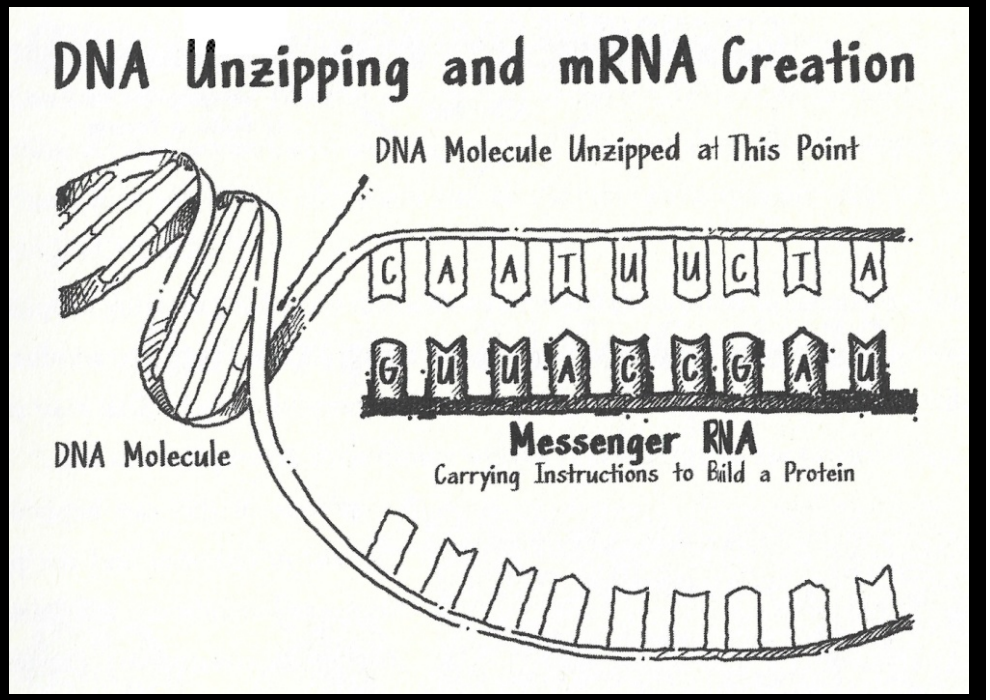
- When the mRNA strand is complete, it moves to a molecular machine called a ribosome (made partially of **proteins**).

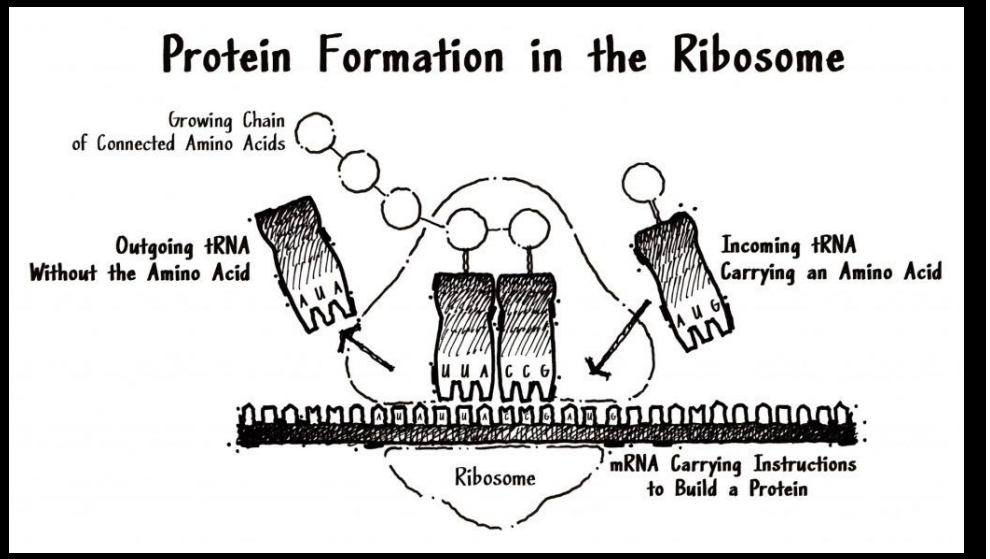
- The ribosome links up tRNA (transfer RNA) molecules according to the code in the mRNA.

- The tRNA molecules are attached to various amino acids. As the tRNA are processed through the ribosome, they give up their amino acids to a form an amino acid chain.

- Once the chain is complete, by some unknown process the amino chain folds itself into a specific shape to form a **protein**.

- None of this can happen without enzymes (made of **proteins**) and the cell membrane (made partially of **proteins**).





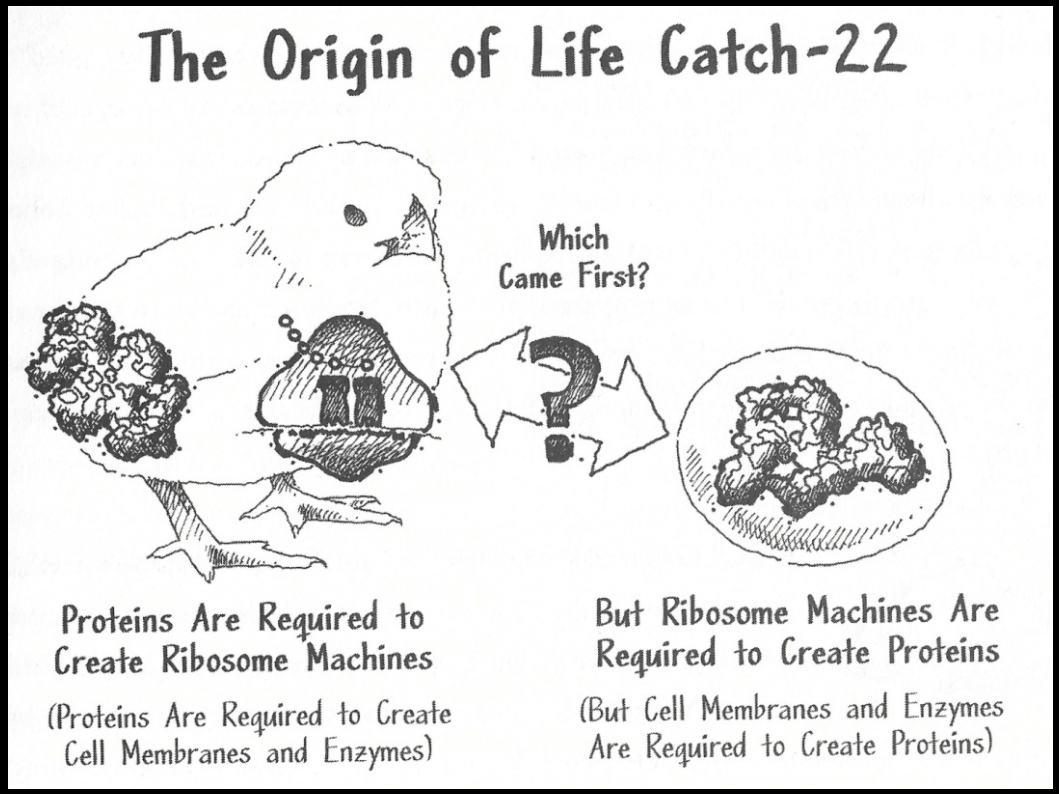
Video of the DNA transcription process:

DNA gives us a "chicken and egg" problem:

- DNA contains the instructions to create proteins.

- But ribosomes, enzymes, and the cell membrane are all needed for the DNA's transcription process, which are all made (at least in part) with proteins.

- We need proteins to read the instruction manual to make proteins. Which came first?



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Could DNA have arisen naturally...

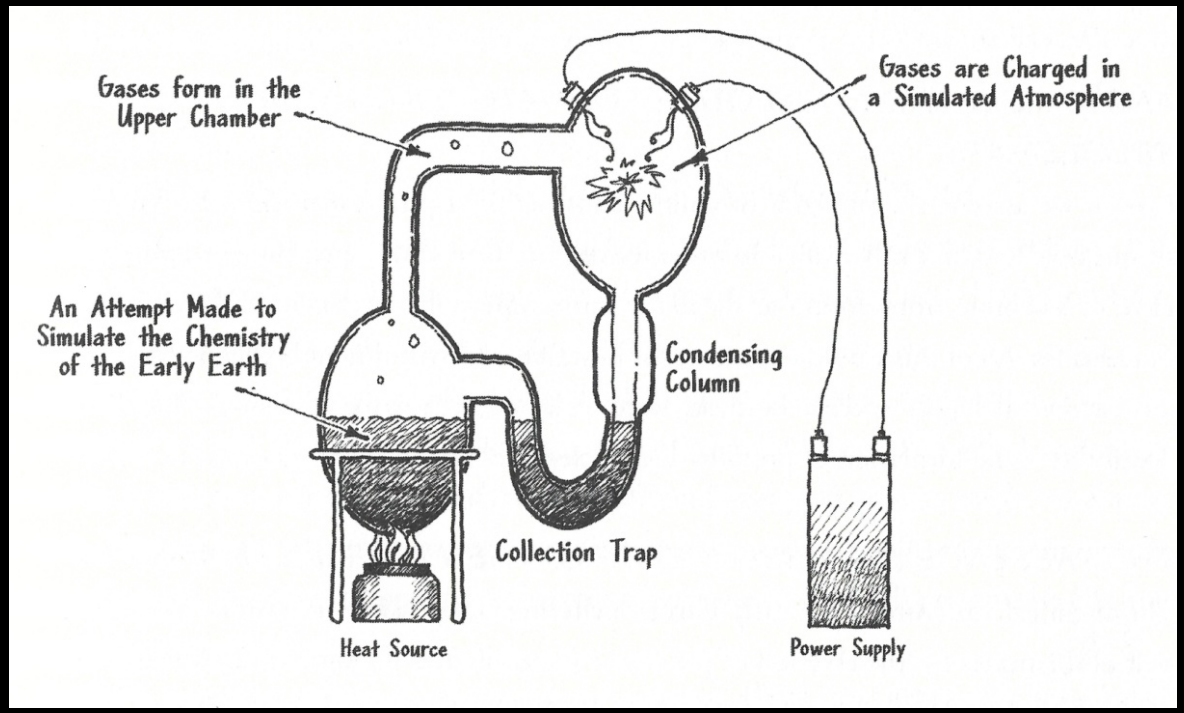
In the atmosphere?

- In 1953, Stanley Miller and Harold Urey mixed ammonia, methane, water vapour, and hydrogen and applied an electric charge to the mix of gases.

- They found that it created several amino acids.

- But now scientists think that Miller and Urey's mix of gases is not what was in Earth's early atmosphere.

- Even if this experiment was valid, life is far more than just a few amino acids. We would still have a "chicken and egg" problem.



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Could DNA have arisen naturally...

In the water?

- DNA, RNA, and other important chemicals for life require phosphate, for which there are no significant sources in the water.
- There would be no way to limit the proportion of left- and right-handed amino acids and nucleotides, making it very difficult to form DNA/RNA.
- We still have the "chicken and egg" problem.

On the land?

- Scientists have tried to recreate early Earth conditions in which clay might capture some water and allow to life's building blocks to be made.
- They found it was impossible to stabilise the environment to allow "life-forming" chemistry to happen.
- We still have the "chicken and egg" problem.

Underground?

- Some have proposed that life began underground, protected from water and atmospheric interference.
- But underground locations in the early Earth would have been very hostile to allow for "life-forming" chemistry.
- We still have the "chicken and egg" problem.

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Could DNA have arisen naturally...

In space?

- This theory is called Panspermia.

- How would complex molecules survive entry into Earth's atmosphere? Simple amino acids might survive the trip, but DNA would not.

- There is a scarcity of materials in space to build life's biological components.

- We still have the "chicken and egg" problem.

- Francis Crick, who co-discovered DNA, proposed a form of this theory in which alien life forms planted life on Earth.

- Interestingly, this theory affirms that an intelligent source is the most reasonable explanation for life's origin, even if they just move the problem to another planet.

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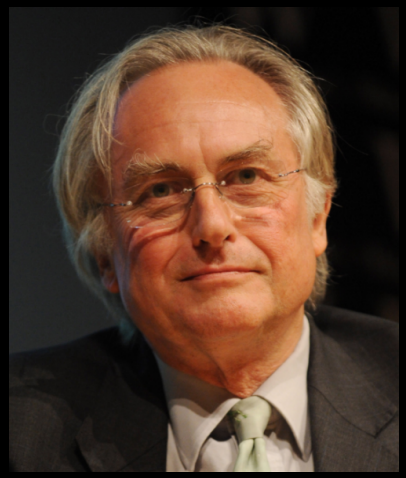
DNA contains information:

- Even if the DNA molecule could be shown to be made through natural causes, the real issue is that DNA contains information.

- Richard Dawkins said, "…genes themselves, within their minute internal structure, are long strings of pure digital information."

- Information theorist Hubert Yockey said, "It is important to understand that we are not reasoning by analogy. The sequence hypothesis (that the genetic code works essentially like a book) applies directly to the protein and the genetic text as well as to written language and therefore the treatment is mathematically identical."



The 5 levels of information:

Dr Werner Gitt categorizes information into 5 levels:

1.	Statistics: a sequence of symbols with no meaning.	skfhO,dhf OidfnN iahdH nkkinhg khtT
2.	Cosyntics: symbols arranged into words, but not arranged into a meaningful sentence.	grand the, eats letting
3.	Semantics: words arranged into a meaningful sentence.	Grandpa is eating
4.	Pragmatics: information that gives directions for a specific action.	Let's eat, Grandpa!
5.	Apobetics: information that makes a request with a further goal in mind.	Let's eat, Grandpa! (knowing that dessert will come afterwards)

We can get statistical level information from natural causes, but that's it.
DNA is the highest level of information. It makes a request to be carried out in order to achieve a further goal. This level of information cannot be made through natural causes.

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Information cannot be reduced to the physical.

John Lennox (an Oxford mathematician) sat at an Oxford University dinner next to a biochemist.

Lennox mentioned to him about the universe being made by a Creator.

The biochemist said that he was an atheist and an ontological reductionist – he believed that everything can be reduced to physics and chemistry.

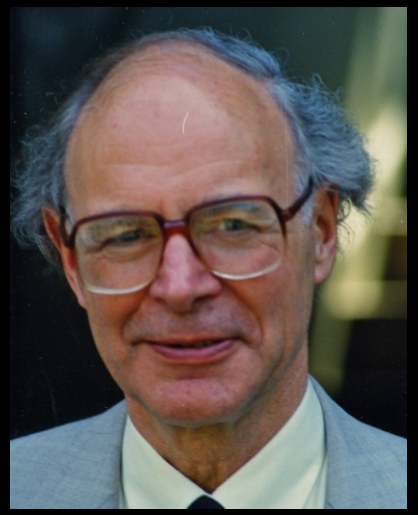
Lennox picked up the menu and pointed to the words "roast chicken". He said, "These letters are marks, but they are semiotic marks. They carry meaning. Can you explain to me the meaning of the marks in terms of the chemistry of the paper and ink?"

The biochemist was silent for a moment, then said, "John, for 40 years I've gone into my laboratory thinking that could be done. But it can't. You cannot explain the semiotics bottom-up. You have to introduce an intelligence."

Information cannot be reduced to the physical.

Agnostic physicist Paul Davies said, "Once this essential point is grasped, the real problem of biogenesis is clear. Since the heady successes of molecular biology, most investigators have sought the secret of life in the physics and chemistry of molecules. But they will look in vain for conventional physics and chemistry to explain life, for that is a classic case of *confusing the medium with the message*. The secret of life lies, not in its chemical basis, but in the logical and informational rules it exploits." (italics added)

"In no way can the concept of 'information'… be articulated in terms of the concepts of physics and chemistry, even though the latter can be shown to explain how the molecular machinery… operates to carry information" – Aurthur Peacocke, theologian and scientist.



Information comes from intelligent minds.

Anytime we see information, we intuitively know that an intelligence was the cause of it. If we wandered into a cave and saw the letter "A" scratched on the wall, we would immediately realise that a human had been there.

What then should we think when we see over 3 billion base pairs in DNA carrying information? The information in DNA is best explained by an Intelligent Designer.

As philosopher Stephen C. Meyer puts it, "There isn't a single example anywhere in the history of the universe in which information came from anything other than an intelligent source."

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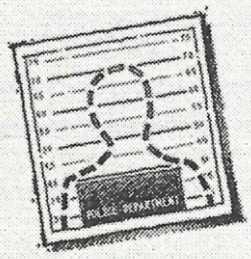
Our Suspect Profile:



Our Emerging "Suspect" Profile:

WHAT IS THE NATURE OF OUR "SUSPECT"?

Given what we know so far, the cause of the universe is:

1. external to the universe
2. nonspatial, atemporal, and nonmaterial
3. uncaused
4. powerful enough to create everything we see in the universe
5. specifically purposeful enough to produce a universe fine-tuned for life
6. intelligent and communicative

Objections:

- Nature can give us information. The ripples of sand on a beach, the regularity of planetary orbits, tides, and seasons are all information.
    - At best, this is low-level, statistical information, not the high-level information of DNA that requires an intelligent source.

- DNA is not really information. That's just an analogy that people use to help us understand how DNA works.
    - DNA contains information that gets transcribed and decoded in order to create proteins. It is not an analogy. It is an apt description of what DNA contains.

- This is just a "God of the gaps" argument. We don't know how DNA arose naturally, so you're just saying "God did it".
    - We are not arguing from ignorance, but from evidence. We have positive evidence that information always comes from a mind. So when we see information in DNA, the evidence-based inference is that a mind put it there.

- Information is physical. Computers store information, and they are physical. So information can be reduced to physical laws.
    - This is confusing the medium with the message. Information is immaterial. A full hard-drive weighs exactly the same as an empty one. The information on the hard-drive cannot be reduced to the physical construction of the drive or the laws of physics by which it operates.