DNA And The Genetic Code

Why Everything we know about Digital Communication and Software Architecture points to Design in Living Things

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What We’re Going to Explore

• Is Life Random?
• Is Evolution Random?
• Communication Theory and Implications for DNA
• New directions for the origins debate.
Heated Argument on a Chinese Bus
Patterns vs. Designs
Naturally Occurring Patterns

Hot Air + Cold Air + Moisture + Time = Tornados & Hurricanes
Naturally Occurring Patterns

Water + Cold Air + Gravity + Wind + Time = Snowflakes
Designs: (Music) Code

Symbolic Representation

Implementation
Code: Microsoft Windows

Symbolic Representation  Implementation
Patterns vs. Information

- Come from chaos
- Simply matter & energy
- Require no thought

- Based on CODE
- Matter + Energy + Information
- Requires thought
How Does DNA Work?

- Double Helix – Divides and bases attach
- **Adenine**, **Thymine**, **Cytosine**, **Guanine**
- Encodes all information necessary for life
- 500,000 to 3 Billion Letters
The Language of DNA

• 4-Character Alphabet - A,T,C,G (comparable to binary 1 and 0 in computers)
• DNA is an Encoding / Decoding Mechanism
• Linguistics Analysis

<table>
<thead>
<tr>
<th>DNA</th>
<th>Language</th>
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<tr>
<td>Nucleotide</td>
<td>Character</td>
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<tr>
<td>Codon</td>
<td>Letter</td>
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<tr>
<td>Gene</td>
<td>Word</td>
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<td>Operon</td>
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<tr>
<td>Regulon</td>
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# DNA and the OSI 7-Layer Model

<table>
<thead>
<tr>
<th>DNA</th>
<th>Computer Network</th>
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<tr>
<td>Chromosome</td>
<td>Application Layer</td>
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<td>Regulon</td>
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<td>Gene</td>
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<td>Codon</td>
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<td>Nucleotide</td>
<td>Data Link Layer</td>
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<td>Helical Structure</td>
<td>Physical Layer</td>
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DNA: Pattern or a Language?

- DNA is a code (“The Genetic Code”)
- A DNA molecule symbolically represents something other than itself
- So which is it more like?
  - Stalactites, Tornados, Snowflakes and Fractals
  - Music, Maps, Computer Programs and Chinese
Fig. 1. — Schematic diagram of a general communication system.

Figure 5.2. The transmission of genetic messages from the DNA tape to the protein tape as conceived in molecular biology. Genetic noise occurs in all stages but is lumped in the figure to fix the idea.

Where Do Codes Come From?

Patterns like snowflakes and hurricanes occur naturally.
Random processes don’t create codes.
No one has ever discovered a code that was not ultimately designed by someone!
The Essential Unit of Biological Reproduction, Evolution, and All Living Things:

Communication System with Encoder, Code & Decoder

Irreducably Complex
Origin of Life Issues

• Where did the first living cell come from?
• John Von Neumann (1950): All self-replicating machines require code
• Would have had both cell functions and a code to symbolize them, in order to reproduce
• Codes are symbolic and arbitrary
• Not derivable from the laws of physics
Nothing in the Purely Physical World Creates Plans, Instructions, Codes or Symbols.

“Information is information, not matter or energy. No materialism which does not admit this can survive at the present day.”

–Norbert Weiner, MIT Mathematician and father of cybernetics
Proof of an Intelligent Designer

1. DNA is a code
2. All codes we know the origin of are designed
3. Therefore DNA is designed.
Where Did The Information in DNA Come From?
5 Possibilities

1. Designed by Humans
2. Designed by Aliens
3. A Product of Chance
4. Undiscovered Law of Physics
5. Designed by God
The Atheist’s Riddle

“Show me a message that does not come from a mind.”

So simple, any child can understand
So complex, no atheist can solve
Prescient Revelation

• 1500 BC: “And God said”
• 90 AD: “In the beginning was the WORD, and the WORD was with God and the WORD was God… Through Him all things came into being.”
For More Information

Articles, lectures and downloads about DNA, information, the origin of life and the universe:

Visit www.CosmicFingerprints.com