

# Information and the Origin of Life

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- *Information, Intelligence, and the Origins of Life*, Randy Isaac
- *The Evolutionary Origins of Genetic Information*, Stephen Freeland
- *Biological Information, Molecular Structure, and the Origins Debate*, Jonathan Watts

*Perspectives in Science and Christian Faith*, December, 2011

# Freeland's Premise and Conclusion

“Biological evolution describes the natural process that transfers information from a local environment into the chemical known as DNA.”

“Many biologists perceive that they are able to understand exactly where life's genetic information comes from (the local environment) by thinking in terms of more fundamental and well-established definitions of information that do not involve intelligent design.”

# Freeland clarification

“This reductionist description of evolution contains little that is new (scientifically) precisely because the aim of this article is to explain how classic neo-Darwinian orthodoxy addresses the issue of the origin of (new) genetic information. This view of evolution is probably best known through the popular works of writers such as Dawkins, and everything written here is in true alignment with insights expressed in his books such as *The Selfish Gene*, *The Blind Watchmaker*, and (most relevant to criticisms of reductionism) *The Extended Phenotype*.”

# Watts Premise and Conclusion

“Additional information transfer comes from environment through the unique relationship structure and information.”

“As a Christian I believe deeply and thoroughly in design. But that design does not oppose the fact that both organisms and molecules can accumulate information through natural processes.”

# Randy Isaac conclusion

“Though the mysteries of life’s origins have not yet been solved, it seems reasonable to conclude that the inference to the best explanation is not an indeterminate intelligent agent but processes akin to reproduction with variation and natural selection. As Christians, we have faith in the existence of an Intelligent Designer who utilizes the design tools of these natural processes to carry out his creative intent.”

# “Climbing Mount Improbable”

Richard Dawkins, 1996

Longs Peak in Colorado is 14,300 ft tall with a 3000 foot shear face that make it impossible for hikers to reach the peak. However, if one goes through the boulder field, keyhole, around the ledge in the back, through the narrows and up the ascent to the peak, it can be reach in many small steps.

Dawkins says this is the key assumption in evolution, that such a pathway exists.

# Is sequestering information from the environment simple and straightforward?

- When multiple mutations are necessary to provide selective advantage, how is the process selected in the intermediate steps?
- Can we demonstrate that the steps up the backside of Mount Improbable are all sufficiently small?
- What does the fitness landscape look like?
- Is it peaks and valleys? If so, how to get through the valleys?
- How about multi-component systems?

# *Where the Conflict Really Lies: Science, Religion and Naturalism....Alvin Plantinga*

- Darwinism, the scientific theory, is compatible with theism and theistic religion; unguided Darwinism, a consequence of naturalism, is incompatible with theism, but isn't entailed by the scientific theory. It is instead a metaphysical or theological add-on.
- Where is the teleology in the modern synthesis of Darwin?
- Where is the teleology in current speculation on the origin of life?
- Note all three PSCF authors praise the wonder of God's handiwork in nature.....but how was God involved? Where is the theism in theistic evolution?

# Simon Conway Morris vs Stephen J Gould

## Inevitable vs Accidental

“One recent claim is that without adding any new causal factors, enough biological evolution will ultimately produce something similar to our own sentient species. Contrary to popular belief, this outcome is not predicted by current evolutionary science. The new claim of *inevitable outcomes has not been refuted by science*, nor has the supporting evidence become overwhelming. In fact, scientists still do not know quite how to weigh the evidence—how to measure inevitability when it comes to evolution.”

Freeland

# Does Intelligent Design Necessarily Assume Divine Intervention?

- Design can provide the necessary direction (teleology) to what chance and necessity will ultimately produce.
- Simon Conway Morris' "deeper design" as evidenced by convergent evolution
- The "electronic" games of my childhood – pen ball machines

# Origin of Life Treatment

- All authors were appropriately circumspect in their speculations regarding possible origin of life scenarios. Thank you!!

# Origin of Life's Challenging Questions

- How does one evolve a genetic code?
- How does selection work in a primordial soup?
- Preferred theory begins with RNA producing protein and eventually DNA.

# Difficulties with Current Theories

- Synthesizing RNA under pre-biotic conditions
  - Robert Shapiro's presentation at 1986 ISSOL conference at Cal-Berkeley (see 1986 book and 1988 paper in *Origin of Life and Evolution of Biosphere*)
  - Freeland explains clearly the problems first noted by Shapiro in synthesizing RNA such as synthesizing ribose sugar under pre-biotic conditions.
  - Cross chemical reactions with garbage in pre-biotic soup
  - Shapiro prefers protein first approach with its own set of problems.
  - Thermal vents don't help—Stanley Miller

# Difficulties with Synthesizing RNA

- “Crystalline minerals show the interesting property of harnessing energy from the environment to grow by making copies of themselves. As they do this, they are creating chemical order from chaos. That is exactly what a salt crystal is doing as you watch saltwater evaporate in a glass or a rock-pool.”

Cairns-Smith (as paraphrased by Freeland)

- Cairns-Smith also proposed minerals that could provide a template with information but how can a crystal provide more than trivial information?

# How Did Life Begin?

- Some accidental path through this incredible maze of chemical difficulties guided by the weak “force” of selection is a sufficient cause to explain the remarkable origin of life. (Really?)
- God has designed the universe with the emergence of life as an inevitable outcome by providing in his design the necessary chemical pathways through the maze to guarantee it will happen.

# Richard Dawkins in movie *Expelled*

- Ben Stein interview with Dawkins at end of movie
- Dawkins response to question about how life began by noting that he doesn't know and neither does anyone else. Very difficult to imagine how it could have evolved here. Maybe life came here from elsewhere, but of course it would have to have evolved there.
- Crick proposed the same thing in his 1982 book. "Maybe conditions there were more favorable."

# Summary

- Intelligent design is not necessarily an alternative to biological or chemical evolution.
- Intelligent design is an alternative to naturalism and reductionism.
- It posits that the natural world is teleological with complex conscious life as the proximate, purposeful outcome that God has in mind.
- How God actually accomplished this purposeful outcome is still to be determined. The “devil” is in the details, which are still emerging.
- Is intelligent design science? I am not sure and don't care. Question is whether it is TRUE that we live in a universe DESIGNED to fulfill God's purposes?