BioCosmos Africa

Part 2,

Clear explanation of Intelligent Design
And its relevance to proposed research

Workshop on Research funding

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Similarities and Differences between Scientific Intelligent Design (ID) and Other Scientific research and Theology

Core Similarities

- **Share the same empirical world:** (Observe and analize the same living and non living world, DNA, Protiens, Complexity, Fine Tuning, Archeological data and Historical record etc...)
- **Use inference to best explanation:** (Seek the best accounting explanatory framework)
- **Use causal reasoning:** (Seek good cause and effect coherence)

Key differences

Naturalistic/Materialistic, “Main-stream” Scientific research arguments

- Accepts only natural causes and mechanistic explanations, no intelligence, no metaphysical causes, no ultimate teleology only for apparent purpose

Scientific ID research arguments

- Intelligent causation which is empirically inferable exists, design is the best inference as the ultimate explanation of the scientific evidence, empirically inferable teleology

Theology

- Accepts ultimate divine causation only, without or with empirical inference, metaphysically real teleology grounded in divine intention

ID Research Must Meet The Basic Scientific Research Requirements

- **Empirically grounded,** Measurable, preferably quantitative
- **Testable and falsifiable**
- **Methodologically rigorous**
- **Explanatorily superior to alternatives**
- **Reproducible**
- **Predictive**

Core Design Detection Logic

Contingency: Not law-like necessity. Not forced by natural, physical, or chemical laws, or simple regularity.

Complexity: Extremely low probability under chance, Hierarchical and Integrated systems

Specification: independently given rare pattern, and functionally targeted (purpose driven structure)

Strong ID Research Characteristics

- Explicitly states the operational definitions of design indicators in the project
- States the quantitative thresholds for design inference
- Clearly defines the null model based on law, chance, and known evolutionary mechanisms
- Gives prospective predictions about limits and accessible evolutionary pathways

Essential Data Interpretation Method in ID Research

- Model-based: Exsisting Design inference models
- Comparative with multiple competing explanatory non ID models, and
- Threshold-driven rather than intuition-based.

Expected Outputs From a High Quality ID Research

1. **Quantitative models:** probability threshold models, search-space accessibility equations, pathway difficulty metrics, information-density measures
2. **Benchmark datasets:** functional sequence libraries, mutational scanning datasets, pathway accessibility maps, comparative molecular machine architectures
3. **Testable predictions :** inaccessible fitness valleys, missing selectable intermediates, modular reuse signatures, error-minimization logic in biological control systems
4. **Comparative publications On:** Design inference, evolutionary nulls, self-organization models, systems constraints

Common Pitfalls of Weak ID Research to avoid

- Undefined or non-operational key terms e.g. “design”
- Argument from ignorance, The subject is rare and difficult to explain hence it must be designed by God
- Argument from the conclusion
- Overextension into social domains, Category confusion between empirical design detection and theological interpretation
- No measurable variables or quantifiable indicators and failure criteria
- Lack of mathematical rigor

Specified Complexity (William A. Dembski)

Find, patterns that matches independent specification

Compute and show probability below universal bound

Reject chance hypothesis

Design inferred as best explanation

Irreducible Complexity (Michael Behe)

Find systems which require synchronized multiple parts to function

Ask, does removal of one part destroys the function?

Present a challenge for stepwise evolution and mechanistic explanations

Conclusions

ID can be rigorous if properly framed

Requires high clarity, and quantification

Future depends on methodological rigor

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Thank You