

Using Non-Physical Causation in Creation Biology

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Non-Physical Causation and Science - The Problem

- Science prefers problems for which the solutions are determinable and the mechanisms are knowable (facilitates knowledge-building)
- Non-Physical Causation is specifically about situations where the solutions are not necessarily determinable, and there is no particular mechanism
- Therefore, how do you formulate non-physical causes in order to aid knowledge-building without determinism?

The Solution - Turing Oracles

- An oracle is a **theoretical construct** developed by Alan Turing, which **represents** the calculation of uncomputable functions.
- Oracles are **characterized** instead of calculated.
- With a rigorous characterization, oracles can be used for knowledge-building even if exact solutions are not known
- Defining human cognition in terms of oracles gives us the benefits of modeling but **does not force cognition into a reductionist framework**

Possible Oracles

- Halting-problem oracle
- Framing oracle (restricts attention to relevant information only)
- Tool oracle (selects appropriate mental tools for a task)

Measuring Oracles in Cognition

- Define an oracle
- Develop a set of test problems for using that oracle
- Measure:
 - Time/accuracy for **completion without training**
 - Time/accuracy for **completion with training**
 - Accuracy for **intuitional response** (judged by giving subjects 2 seconds to solve)
- Also ask for subject **introspection** for their problem-solving process

Evaluating Measurements

- Accurate intuitional response across a wide variety of people indicates a fundamental oracle
- Accurate responses, but not accurate intuitional responses indicate a composite oracle (use introspection results to help redefine the oracle)
- Accurate responses only with the training group indicate a composite oracle
- High variance of responses indicate the possibility of individualized giftedness

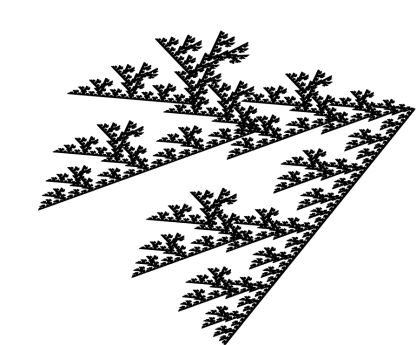
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