

DESIGN VS. CHANCE: ALTERNATIVE FRAMEWORKS FOR SCIENTIFIC DATA

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Introduction

Some Definitions

Chance/Randomness - several levels
anything can happen
anything w/in certain law-boundaries
no mind, but some ordering mechanism

Design - also several levels
working w/o limitations
various limitations: time, materials

A Thought Experiment

Monkeys typing "ENCYCLOPAEDIA BRITANNICA"
"Give enough monkeys enough time..."

Purely random case
Imagine electric typewriters: all caps, 33 keys, typing at 3 keys/sec
24 characters, so 33 to 24th power = 3×10^{36} combinations
The job will take 3×10^{28} monkey-years

Dawkin's *guided* randomness
use computer network instead of typewriters
monkeys make variations on chosen "best case"
job completed in only a few minutes w/ a few monkeys

(Dawkins uses this for illustration of how natural selection works, but it is really a sample of design w/ limitations)

Design Versus Chance

The Origin of the Universe

Recent move toward absolute origin at big bang

chance: fluctuation in vacuum produces universe
design: God created it
design in inanimate universe?
anthropic principle

Quantum Mechanics

Copenhagen interpretation dominant, featuring chance as basic
various other interpretations

The Origin of Life

Dawkins: evolution of life from non-life reasonable if 1 chance in 10 to 20th per planet
per billion years
Calculation for protein of 100 linked amino acids
Langton's self-reproducing automaton

The History of Life

Non-theistic evolution: problem of designing a computer simulation of natural selection
to show it will work
Various forms of creation (th-evol, old-earth & young-earth creation): minds can produce
order, so creation model works in this sense

Human History

Design in history?
Suggest Christian model supported by prophecy, transformed lives, changed societies

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