SOCIETY OF SNAKE PEOPLE

Scientific Facts Humans Would Objectively Benefit to Know More Better About



DEPARTMENT OF JUSTIFICATION

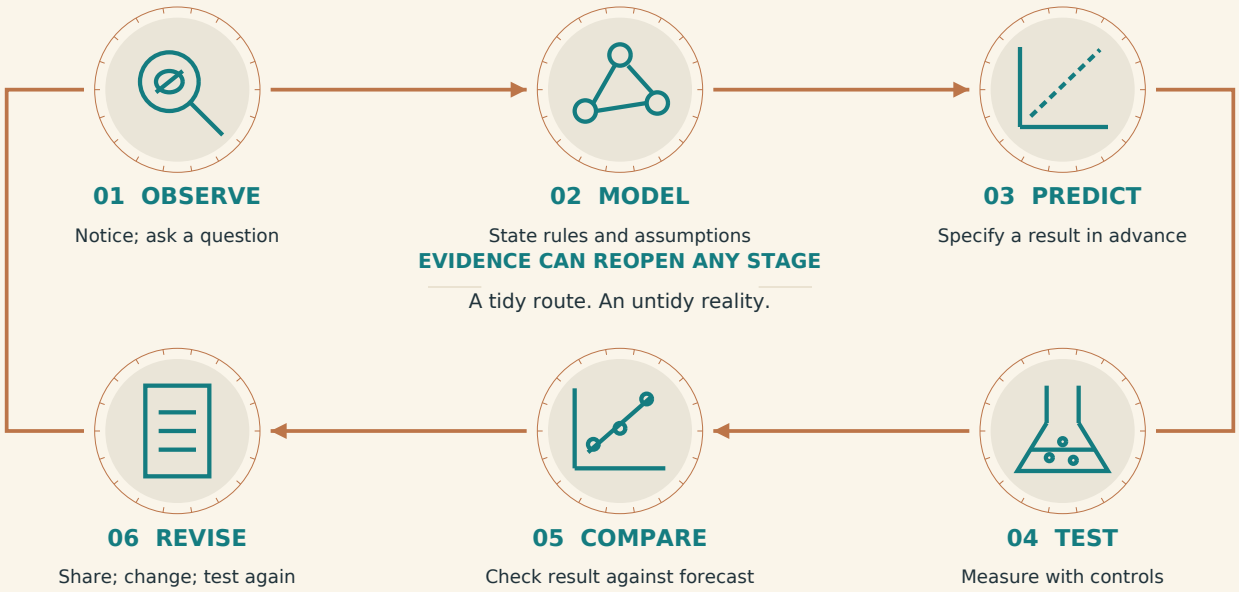
Examinations from the 300-Million-Year Archive

SCIENTIFIC MODEL / THE DISCOVERY TRAIL

How discovery is made

A model represents. A method puts the representation at risk.

A scientific model is a simplified account of a system. The scientific method is the wider practice of asking questions, deriving predictions, testing them and revising what is believed. [44-45]



DISCOVERY PLATE / Inquiry can begin at several points. New observations, criticism and independent tests can reopen any stage. The arrows are invitations to return. [44]

Departmental finding: A useful model risks being wrong in a way that can be checked. A decorative seal has not been found to improve its predictions.

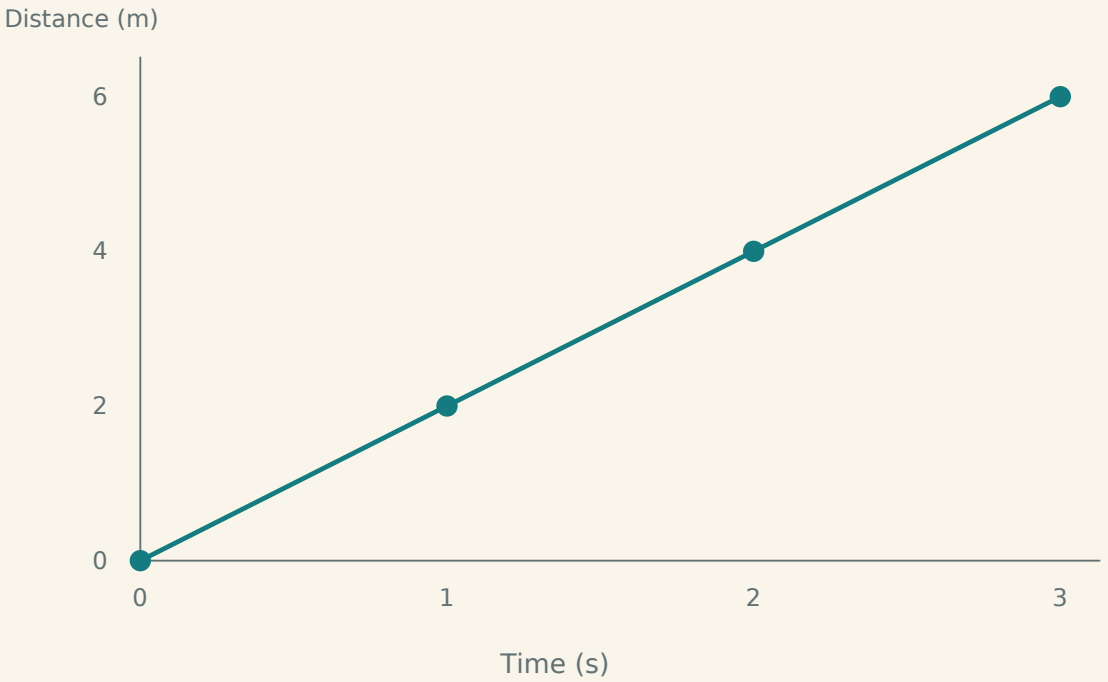
Reality has been authorized to disagree with the explanation.

SCIENTIFIC MODEL / WORKED EXAMPLE

A prediction can be checked

The model is made explicit before the outcome is measured.

MODEL: d = vt, WITH v = 2 m/s AND d(0) = 0



MODEL FIGURE / Constant velocity is assumed. The prediction is conditional, not a universal law of moving carts.

OBSERVATION TO BE CONSIDERED

A distance of 6 m is predicted after 3 s. These points are calculated from the rule; no measurements are shown.

QUESTION TO BE CARRIED FORWARD

A test would compare timed positions with the prediction, accounting for measurement uncertainty. Curvature could indicate changing velocity.

A prediction has been made. The result has not been instructed to cooperate.

LESSON / CLASSIFYING A CLAIM

Evidence has several forms

From the learnings of the 300-Million-Year Archive.

Archive propositions are examined beside scientific findings. Their different roles are kept visible; an official-looking page is not itself evidence.

OBSERVATION	What was observed or measured, under specified conditions.
MODEL	A set of rules used to explain things and predict what happens next.
ARCHIVE ACCOUNT	The Society's beliefs and stories, including the Archive's age. These carry religious meaning; they are not measured dates.
OPEN QUESTION	What evidence could be gathered? What result would require revision?

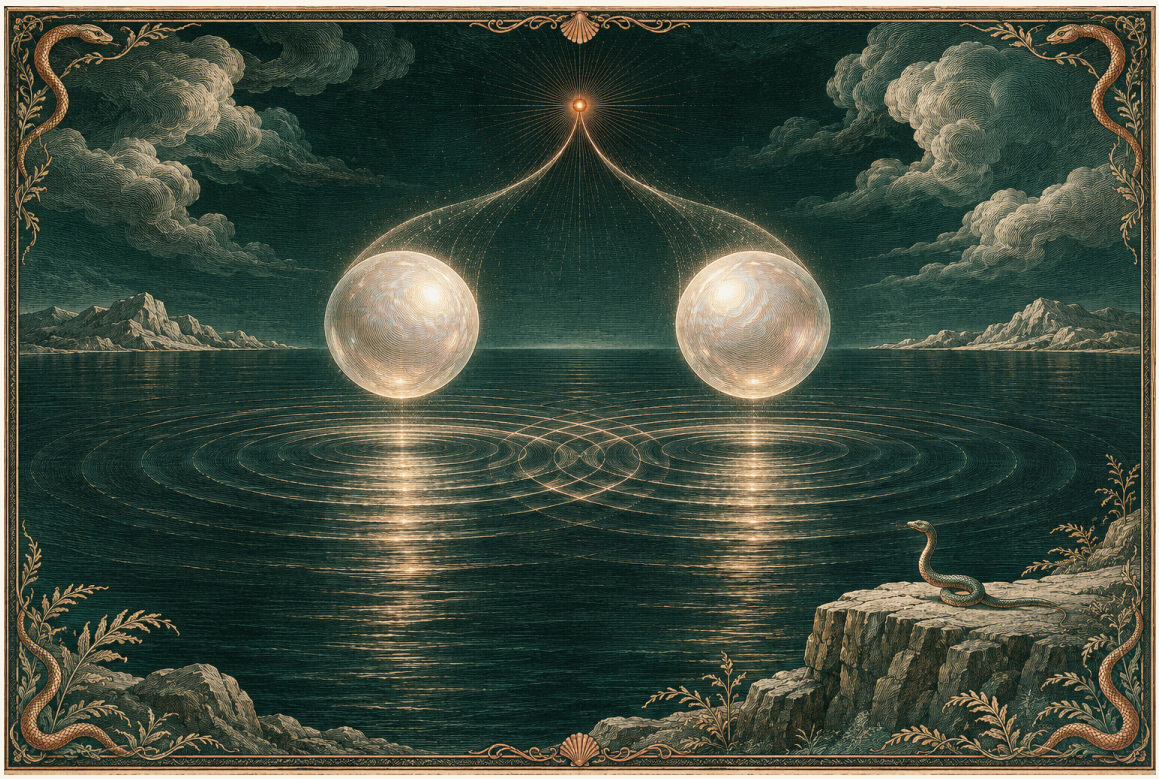
Examination: Is a statement a measurement, a model, or an Archive account? What evidence would strengthen it? What finding would require revision? Claims made by the Department are included.

Disagreement does not cancel the lunch entitlement.

VISUAL EXAMINATION / LESSON OPENING

A beginning is being imagined

The question is retained before an explanation is adopted.



The First Comparison. Interpretive art from the Archive cosmology.

OBSERVATION TO BE CONSIDERED

What could a first distinction mean without an existing reference?

QUESTION TO BE CARRIED FORWARD

Which part of the account is an assumption, and what observable result could distinguish it from another account?

An origin story is being examined, not mistaken for a photograph.

ARCHIVE ACCOUNT / THE FIRST OBSERVER

First, there was no point

Before there was something, there was no place to put it.

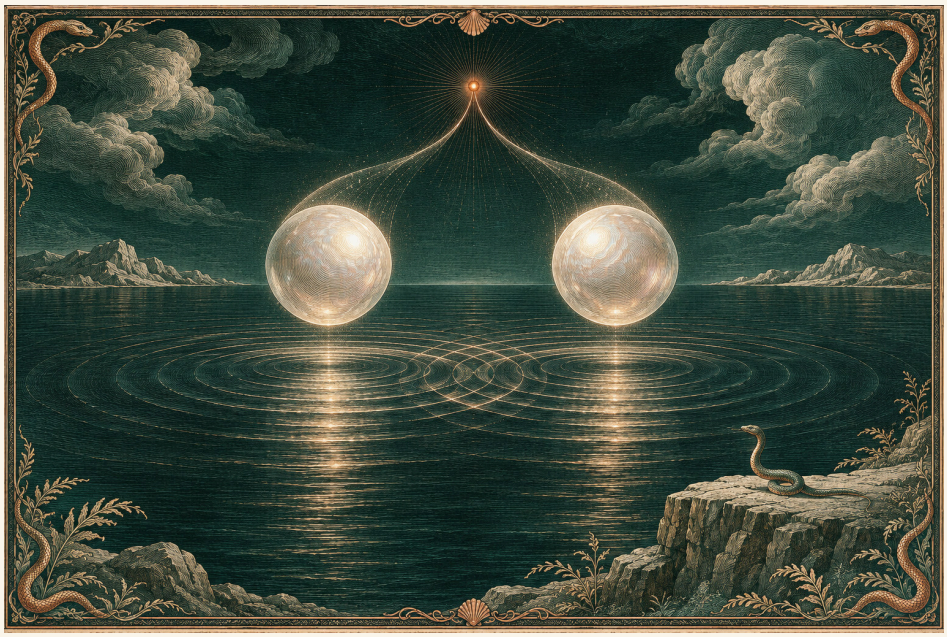


PLATE A / The First Comparison. An illustration of the Archive account, not a measured creation event.

QUESTION

How could a universe with relations and change be imagined from a state with neither?

TEST STATUS

No distinctive, measurable prediction is supplied by this creation account. It is a religious narrative, not an observed origin sequence.

ARCHIVE ACCOUNT

In the First Boredom, a point is established. A second point permits comparison; change permits before and after.

IMPLICATION

Meaning and evidence can be examined separately. A cosmic motive cannot be inferred merely because the story is satisfying.

Existence now had a comparison. A committee would follow.

ARCHIVE SEQUENCE / GEOMETRY

The unfolding: less, then some

Null belongs to the story. The usual geometry count starts at 0D.

NULL / No point yet

No point. No distance. No clock. This is the starting place in the Archive account.

0D / One point



point A

A point has no width, height or depth. The printed dot has size. A technical complaint has been filed with the printer.

1D / One direction



Two distinct points define a straight line. One coordinate specifies a position along it. [34]

FIGURE 1 / A line holds infinitely many positions in this model. Two dots alone are not a line; the line is a further step. [34]

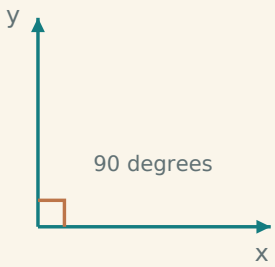
A point has no width. Please do not attempt to stand on it.

VISUAL EXAMINATION / LESSON OPENING

A direction is not a distance

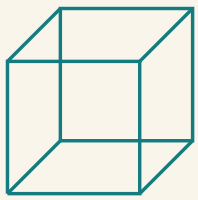
The question is retained before an explanation is adopted.

2D / PLANE



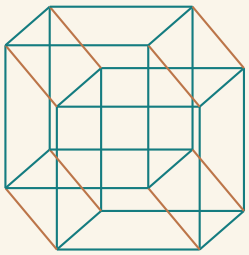
2 numbers: x, y

3D / SOLID



3 numbers: x, y, z

4D / HYPERCUBE



4 numbers: x, y, z, w

Mathematical constructions. A 4D hypercube is projected onto this flat page. [34,36]

OBSERVATION TO BE CONSIDERED

The location of a point on a line requires one coordinate. Two independent coordinates locate a point on a plane.

QUESTION TO BE CARRIED FORWARD

What changes when a new coordinate is introduced? What remains unchanged when an existing axis is merely extended?

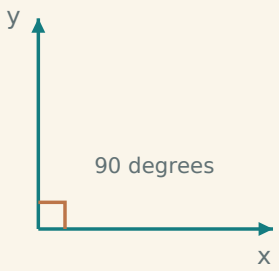
More length has been requested. Another dimension has not been supplied.

GEOMETRY / DIMENSIONS

More directions are available

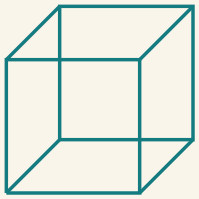
Each independent coordinate adds one dimension to the description.

2D / PLANE



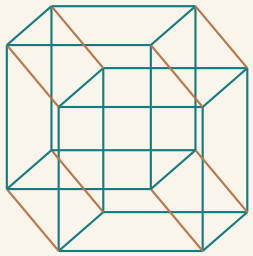
2 numbers: x, y

3D / SOLID



3 numbers: x, y, z

4D / HYPERCUBE



4 numbers: x, y, z, w

FIGURE 2 / Flat drawings of shapes. Gold edges stand for the fourth direction of a hypercube. A flat page cannot show all its true angles. [34,36]

QUESTION

Does a longer line gain another dimension?

CONSTRUCTION

A dimension adds an independent coordinate. In Euclidean space, a new axis can be chosen perpendicular to the existing axes. [34,36]

CHECK

A finite square already requires two coordinates; a solid cube requires three. Infinite extension is unnecessary.

LIMIT

Higher dimensions are mathematically consistent. Their physical existence requires evidence beyond a projected drawing. [6,10,36]

Making a line longer does not issue it a new direction.

VISUAL EXAMINATION / LESSON OPENING

The leaf exceeds its report

The question is retained before an explanation is adopted.



Interpretive botanical plate. The simplified drawing is useful because it omits detail.

OBSERVATION TO BE CONSIDERED

The leaf, the reflected light, the visual experience and the word green are related but distinct.

QUESTION TO BE CARRIED FORWARD

How would the report change under different illumination? Which quantities could be measured, and which are descriptions of experience?

The report has been accepted. The leaf has not been reduced to it.

OBSERVATION / PERCEPTION

Where was the green?

A physical event, a perceived color and a word are distinct parts of the account.



LIGHT
wavelengths arrive

↓

SURFACE
light is reflected

↓

EYE + BRAIN
signals are processed

↓

REPORT
a label is supplied

FIGURE 3 / Interpretive art beside a schematic route from light to a color report. The diagram is not a complete theory of consciousness. [41]

OBSERVATION

An object's apparent color can vary with illumination.

EXAMINATION

The same object can be compared under different lighting while viewing conditions are recorded. Observation and explanation should be kept distinct.

MODEL

Reflected light stimulates cone receptors. Their overlapping responses are combined by the visual system to support color perception. [41]

IMPLICATION

Human reports are selective representations. A useful word such as green is not a complete description of the leaf.

The word has arrived. The leaf retains its other duties.

VISUAL EXAMINATION / LESSON OPENING

A rule can manufacture a clock

The question is retained before an explanation is adopted.

NULL / No point yet

No point. No distance. No clock. This is the starting place in the Archive account.



0D / One point

A point has no width, height or depth. The printed dot has size. A technical complaint has been filed with the printer.



1D / One direction

Two distinct points define a straight line. One coordinate specifies a position along it. [34]

Geometry supplies relations. A temporal update rule must be supplied separately.

OBSERVATION TO BE CONSIDERED

A model can be defined by states and an ordered update rule. The update count can be used as its internal clock.

QUESTION TO BE CARRIED FORWARD

What would connect this count to seconds measured by a physical clock? Which prediction would distinguish this model from an alternative?

The arithmetic is valid. Its physical appointment remains pending.

MODEL / R1: AN ORDERED CHANGE RULE

Before now has an after

The Archive asks whether change is the start of experienced time.

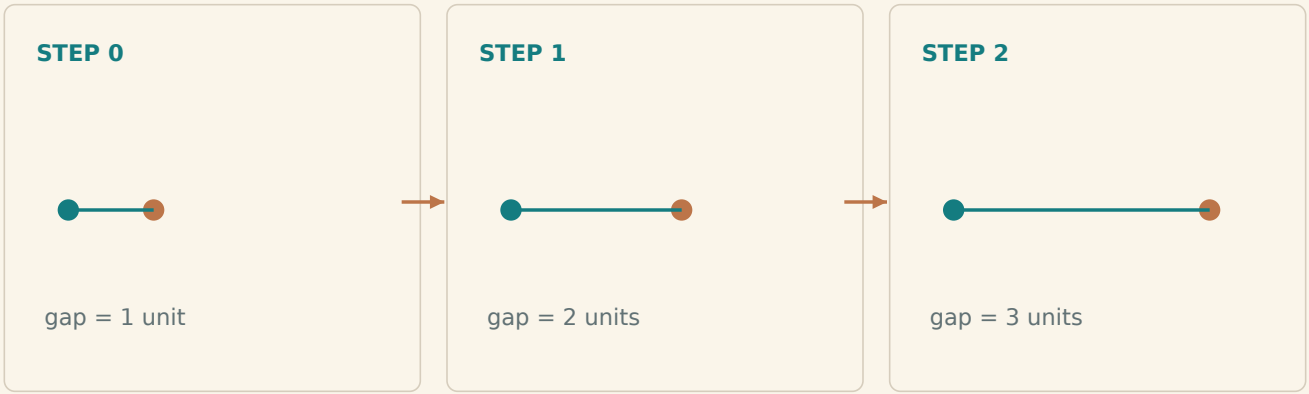


FIGURE 4 / A calculated model. Arrows show the order of steps, not a new direction in space.

ASSUMPTIONS

Two labeled points are placed one unit apart. An ordered update rule is supplied.

PREDICTION

One unit is added per update. After three updates, the separation is four units. The update count serves as the model's clock.

CHECK

The arithmetic follows from the rule. No experiment has yet linked an update to a physical second.

LIMIT

Two points alone do not establish time. A physical clock and distinctive predictions are required before comparison with relativity. [4,8,33]

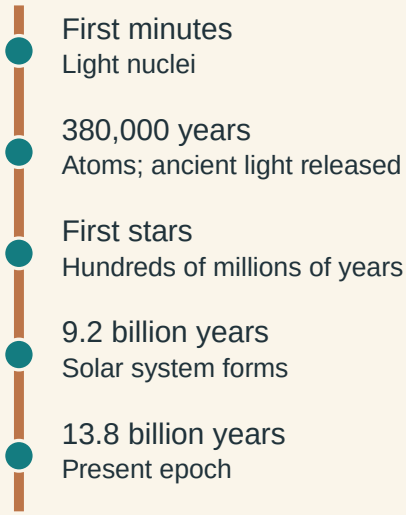
Open question: What real process would count one step?

A clear rule is a start. The universe must still agree.

VISUAL EXAMINATION / LESSON OPENING

A history is inferred from traces

The question is retained before an explanation is adopted.



Selected milestones in standard cosmology. Their spacing is schematic. [1-3]

OBSERVATION TO BE CONSIDERED

Different observations constrain cosmic history: expansion, element abundances and ancient radiation.

QUESTION TO BE CARRIED FORWARD

Would one model account for all three? Which new result would require its parameters or assumptions to be revised?

The past has left evidence. It has not submitted a memoir.

OBSERVATION + MODEL / COSMIC HISTORY

The universe has been busy

Several kinds of evidence point to a hot, expanding early universe.

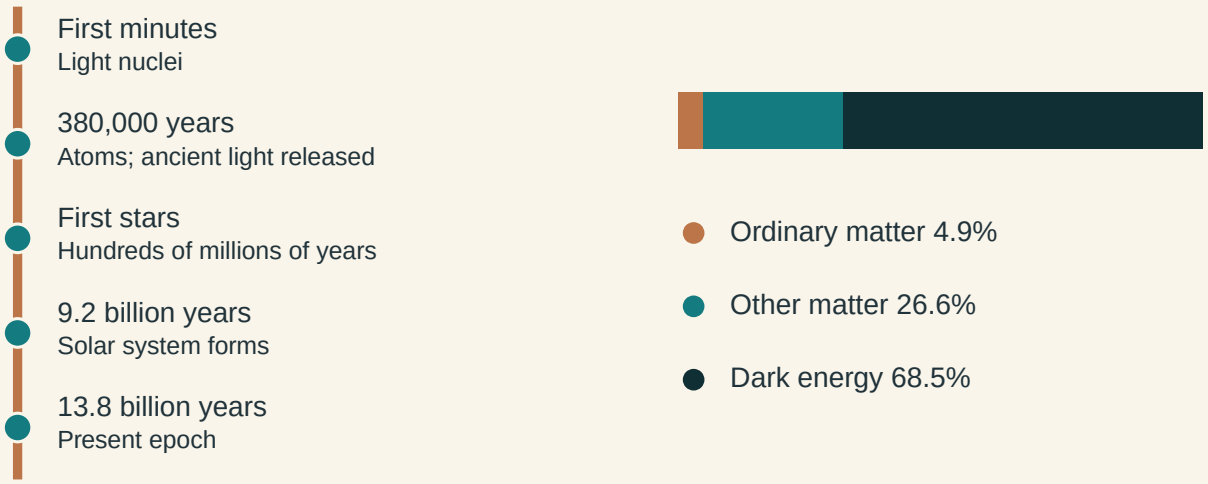


FIGURE 5 / Left: major events, with gaps not drawn to scale. Right: estimated shares of today's cosmic energy budget, including matter. [1-3]

OBSERVATIONS

Cosmic expansion, light-element abundances and the microwave background provide independent constraints. [1-3]

TESTS

Predicted patterns and element abundances are compared with observations. Agreement across different measurements strengthens the model.

MODEL

A hot early universe is described by standard cosmology. Its fitted age is about 13.8 billion years. [1-3]

LIMIT

Dark matter and dark energy describe inferred components. Their physical nature, and the ultimate cause of the early state, remain unresolved.

Giving a mystery a name does not finish the paperwork.

OBSERVATION / THE MEDIUM MATTERS

Light has different speeds

Light does not travel at one speed in every medium.

VACUUM REFERENCE: c = 299,792,458 m/s

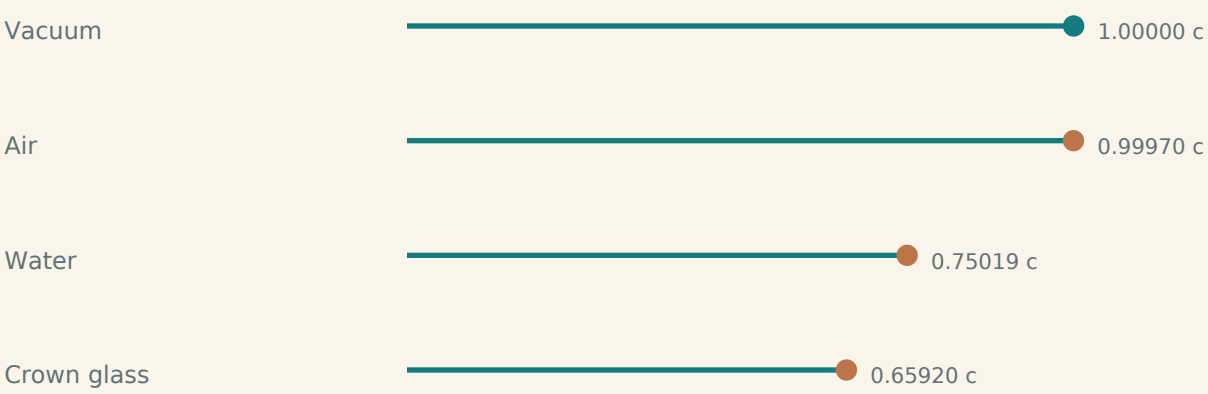


FIGURE 6 / Calculated phase speeds using representative visible-light indices: 1, 1.0003, 1.333 and 1.517. Actual values depend on wavelength and conditions; glass composition matters. [35,47-49]

OBSERVATION

Light propagates at different speeds through vacuum, air, water and glass. The medium-dependent variation is established physics. [35,47-49]

COMPARISON

Air differs slightly from vacuum; water and glass produce much larger reductions. Phase, pulse and signal speeds must be distinguished. [35,47]

MODEL

Phase speed is described by v = c/n. The refractive index, n, depends on wavelength, material and physical conditions.

SCOPE

The symbol c identifies the vacuum reference. Material-dependent speed and proposed variation of vacuum physics are different claims, so they are recorded separately.

The speed of light comes with a sentence around it.

RELIGIOUS SCIENTIFIC FACTS / ARCHIVE DOCTRINE

The Archive's wider claim

A Society proposition about what lies beyond the measured record.

Across the Whole, light is variable. Its speed is not bound to one value for all places, all conditions and all time.

DOCTRINAL STATUS

Within Society doctrine, variation is asserted throughout the universe, including vacuum. This is a religious proposition; an empirical demonstration is not being claimed.

MEASURED RECORD

The preceding page establishes speed differences between media. Those observations alone do not establish variation of vacuum c over cosmic time. Tests of fundamental-constant variation require additional predictions and measurements. [35,46]

THE LONG HORIZON

A trillion-year horizon may be invoked in Archive cosmology. Such a history has not been established by human observations. The unknown is left open; it is not plotted as data.

A religious proposition may be definite. Its evidence category remains attached.

VISUAL EXAMINATION / LESSON OPENING

A field assigns quantities

The question is retained before an explanation is adopted.



Interpretive field landscape. The curves are not measured spacetime geometry.

OBSERVATION TO BE CONSIDERED

Temperature, velocity and geometry require different kinds of mathematical description.

QUESTION TO BE CARRIED FORWARD

Which quantity is assigned at each point? How should its components change when a different coordinate system is used?

The mathematical job title is not an unlimited permission slip.

MATH / FIELDS AND TENSORS

Fields have different jobs

A field assigns a value or quantity to each place in a region.



SCALAR
temperature
3

VECTOR
wind velocity

TENSOR
directional relations

FIELD STUDY / The landscape is interpretive art. Numbers, arrows and an ellipse distinguish quantity types; no measured spacetime geometry is shown. [37-39]

DEFINITION

A field assigns a quantity to each location. Scalars assign numbers; vectors assign magnitude and direction. [37]

APPLICATION

In general relativity, the metric tensor describes spacetime geometry and enters calculations of intervals and curvature. [38-39]

MODEL

Tensor components transform by defined rules when coordinates change. Tensor fields assign such quantities throughout a region. [37]

LIMIT

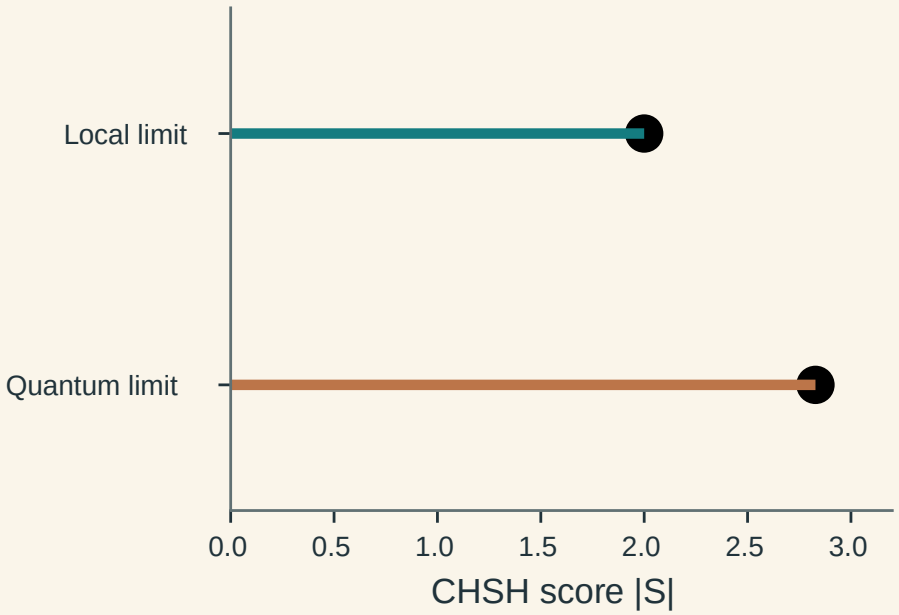
A tensor can describe deformation. Neither infinite reach nor the universe's global shape follows from the word tensor alone.

The field has a job description. Infinity is not required.

VISUAL EXAMINATION / LESSON OPENING

A limit can be exceeded

The question is retained before an explanation is adopted.



Theoretical CHSH bounds: 2 for the local class and 2 sqrt(2) for quantum theory. [7]

OBSERVATION TO BE CONSIDERED

The displayed limits are predictions of different mathematical descriptions under stated assumptions.

QUESTION TO BE CARRIED FORWARD

What does an experimental violation rule out? Which additional claims would still require their own evidence?

One explanation has failed. Every other explanation has not therefore succeeded.

OBSERVATION + THEORY / QUANTUM PHYSICS

Matter does the field thing

Quantum behavior is not constrained by familiar human intuitions.

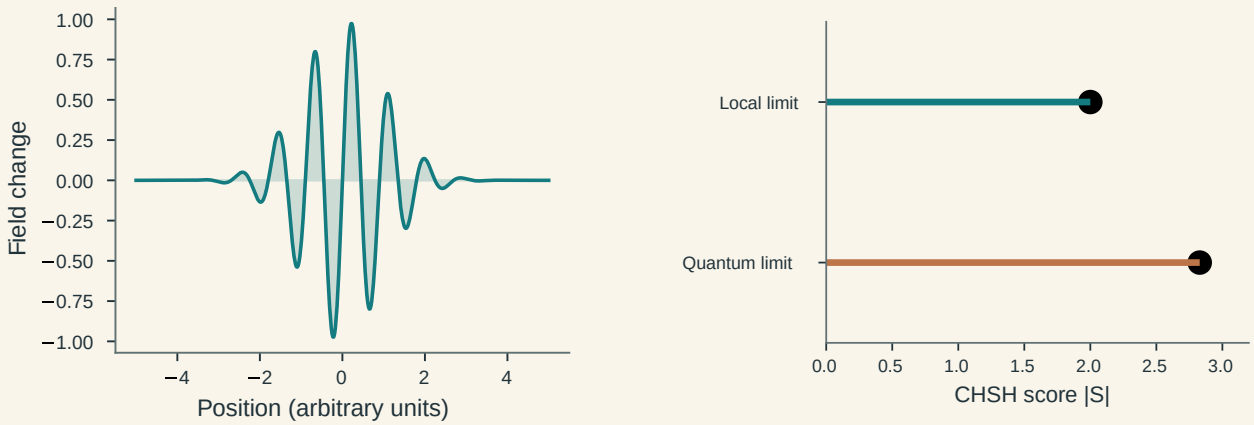


FIGURE 7 / Left: an example field wave, not measured data. Right: mathematical Bell-test limits, 2 and 2.828. The technical score is CHSH |S|. [5-7]

MODEL

Quantum field theory describes elementary particles as field excitations. The Higgs discovery supported a predicted field and mechanism. [5]

EVIDENCE

Experiments violate those inequalities. A broad class of local hidden-variable explanations is therefore excluded. [7]

PREDICTION

Bell inequalities bound correlations in local hidden-variable models under stated assumptions. Quantum theory permits stronger correlations. [7]

LIMIT

The result establishes neither a consciousness field nor a requirement that matter be watched. Entanglement provides no controllable faster-than-light signal. [5-7]

A surprising result does not approve every surprising explanation.

VISUAL EXAMINATION / LESSON OPENING

Order is maintained by exchange

The question is retained before an explanation is adopted.



Interpretive natural-history plate. Crystal growth alone is not a biological test for life.

OBSERVATION TO BE CONSIDERED

A plant, a crystal and a snake all contain structure. Their processes and biological properties are different.

QUESTION TO BE CARRIED FORWARD

Where should the system boundary be drawn? Which energy and material flows must be included before entropy is assessed?

Breakfast remains necessary after the philosophy has been completed.

OBSERVATION / ENERGY AND LIFE

Order has running costs

Living things keep order by exchanging energy and matter.

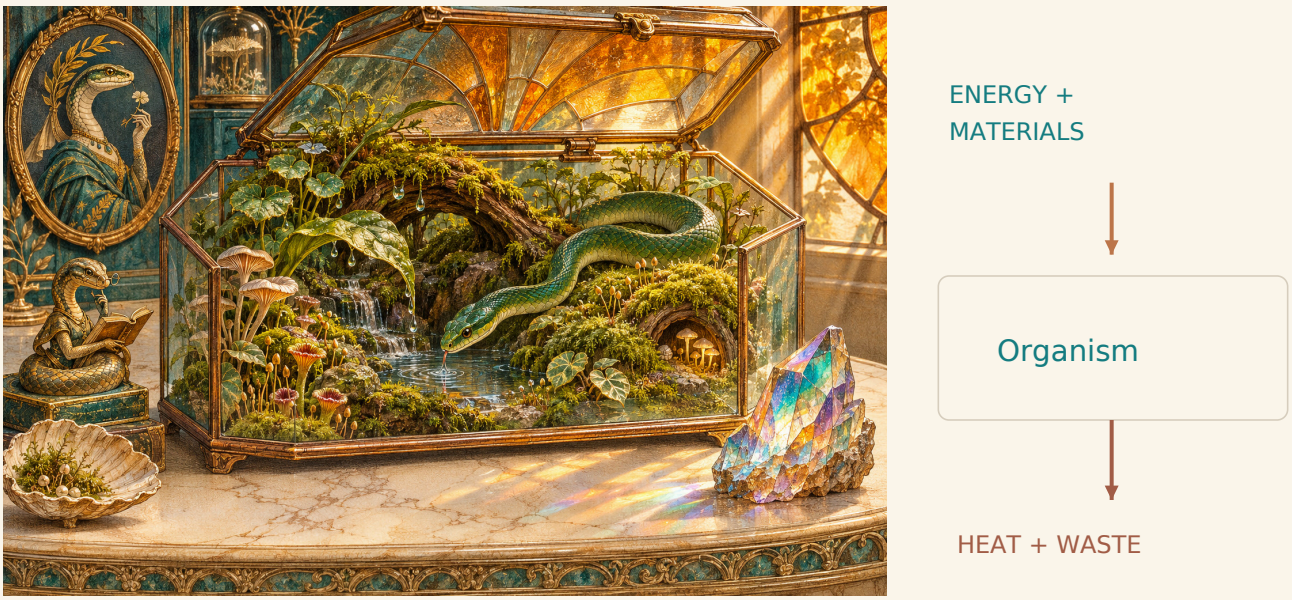


FIGURE 8 / Living and nonliving specimens beside an open-system model. Order alone does not establish biological life. [13-15]

OBSERVATION

Organisms maintain internal structure while exchanging energy and matter with their surroundings.

MODEL

Local order can increase while total entropy increases. Biological organization therefore fits thermodynamics; it does not reverse the second law. [13-14]

COMPARISON

Crystals also form ordered structures. Growth or complexity alone is insufficient to establish metabolism, evolution or experience. [15]

SCOPE

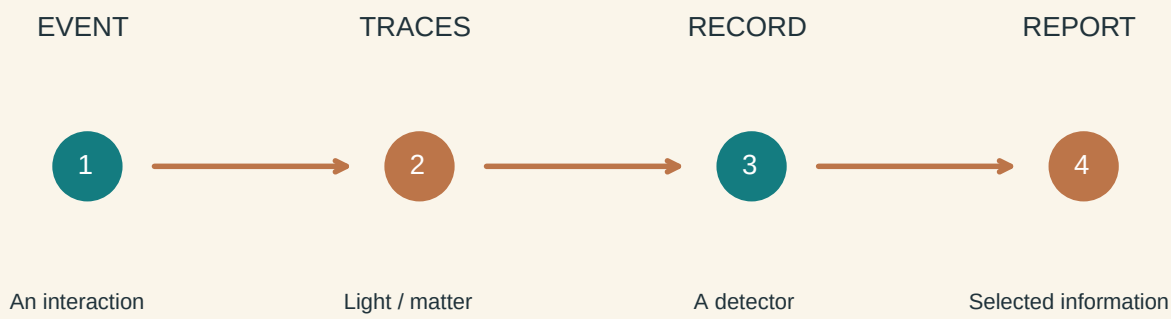
Biological life and the Archive's Living Universe are different categories. Humans are helped when a metaphor is not mistaken for a biological test.

Breakfast is still required. The philosophical position has been noted.

VISUAL EXAMINATION / LESSON OPENING

A record is not a replay

The question is retained before an explanation is adopted.



Possible records are shown schematically. No complete archive is implied. [19-21]

OBSERVATION TO BE CONSIDERED

Interactions can leave traces in light, matter, instruments and memory. Each record captures selected properties.

QUESTION TO BE CARRIED FORWARD

Is information preserved, accessible, interpretable or complete? These are different questions and require different evidence.

The record exists. Permission to recover everything has not been issued.

OBSERVATION + MODEL / EXPERIENCE AND RECORDS

The observer gets only part

A record can be preserved without being complete or accessible.

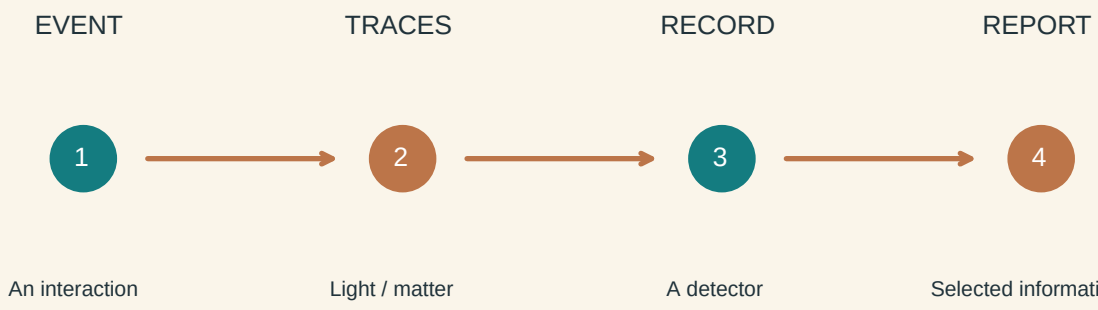


FIGURE 9 / Events leave partial traces in light, matter and memory. A trace can form without a conscious reader. [19-21]

QUESTION

Does an event remain accessible after it has occurred?

MODEL

Unitary quantum evolution preserves information in a closed system. Environmental interactions can leave partial records. [19-21]

LIMIT

Information may become dispersed and practically inaccessible. Preservation does not promise a readable replay or establish every possible history as actual.

IMPLICATION

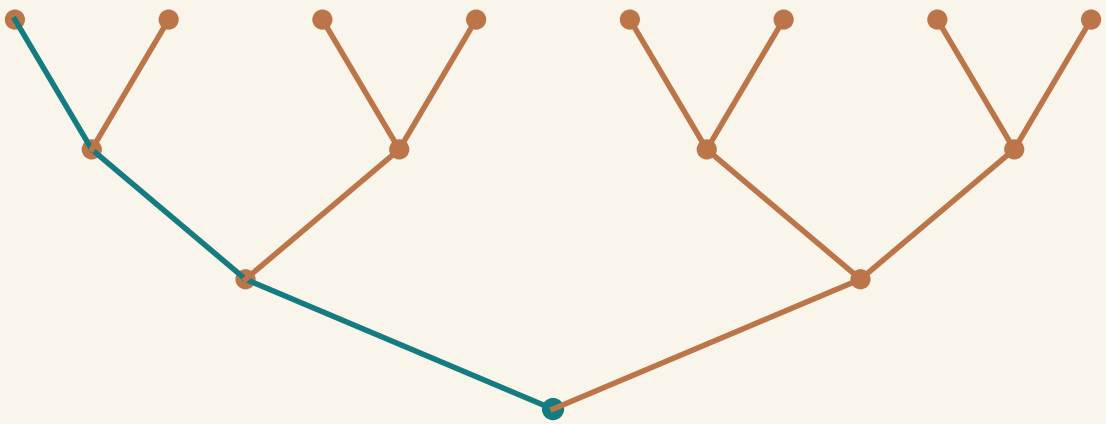
Human memory is one record among others. Intuition may reflect learned patterns, but confidence alone does not establish accuracy. [18]

The minutes of the meeting are not the entire meeting.

VISUAL EXAMINATION / LESSON OPENING

Possibility is not observation

The question is retained before an explanation is adopted.



A finite possibility tree. It is not a literal map of the full Ruliad or extra spatial dimensions. [9]

OBSERVATION TO BE CONSIDERED

A rule system can generate many possible paths. A selected path is not the same as the entire possibility space.

QUESTION TO BE CARRIED FORWARD

Which claims concern the mathematical framework, which concern the observed universe, and which belong to the Archive account?

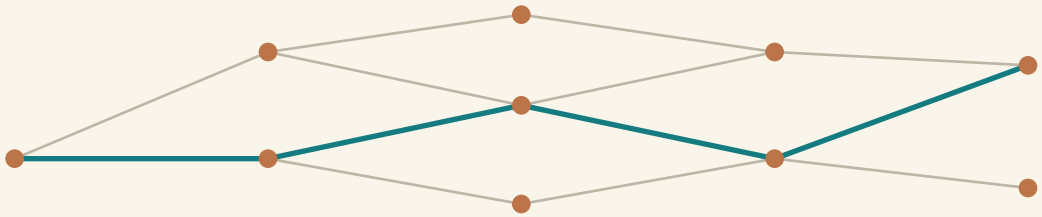
A larger framework has been proposed. Its contents remain to be examined.

MODEL + ARCHIVE ACCOUNT / THE WHOLE

The Ruliad and the observer

A vast set of possibilities. A much smaller point of view.

The Ruliad is the proposed totality of all possible computational processes and their relations. Observers are modeled as patterns with limited computational access. Particular space-like networks belong within the framework; the Ruliad is not simply a collection of physical locations. [9]



RULIAD STUDY / A small rule network. Dots are states; lines are possible steps. One path is highlighted. This is not a map of extra space. [9]

BIOLOGICAL EVIDENCE

Human sensation, thought and memory depend on functioning biological systems. Brain death permanently removes the capacity for consciousness; it is not coma. [40]

ARCHIVE ACCOUNT

Awareness is described as a ripple that remains after bodily functions cease. Attention preserves distinction; release returns it to the Whole.

MODEL LIMIT

The Ruliad framework does not establish personal awareness after brain death. Neither does the cited biological research. [9,40]

OPEN QUESTION

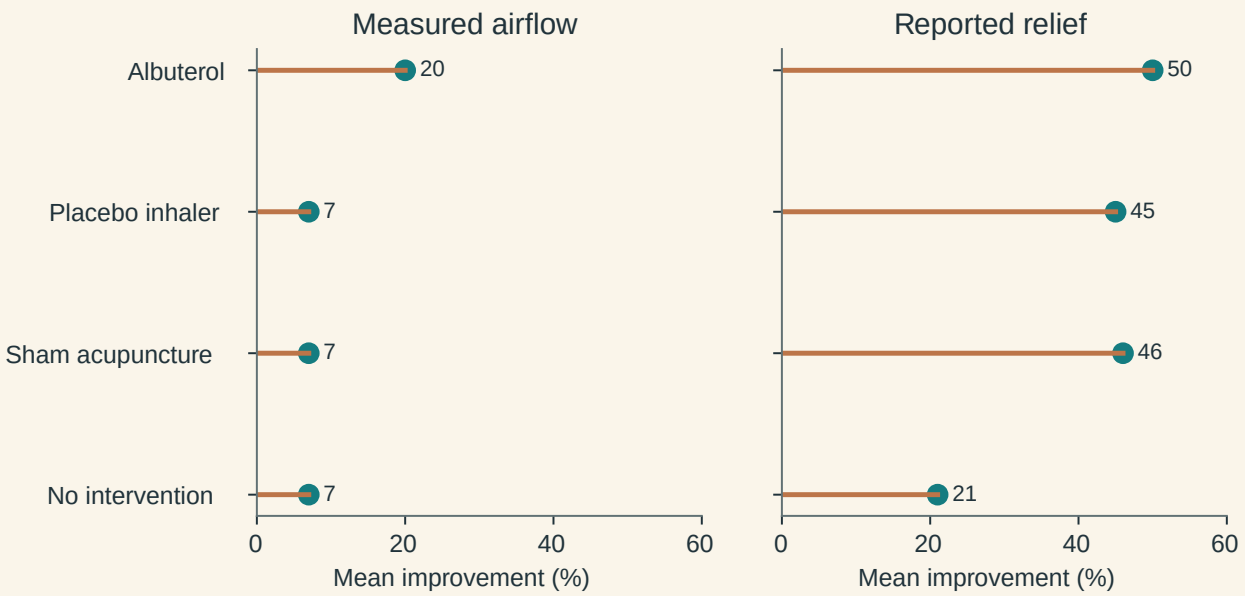
How could continuing awareness be identified without memory, sensation or thought? This remains a religious account, not a demonstrated survival mechanism.

An account of continuity has been filed. Its test remains open.

VISUAL EXAMINATION / LESSON OPENING

Two outcomes can disagree

The question is retained before an explanation is adopted.



Published group means from the asthma study; error bars are omitted. [22]

OBSERVATION TO BE CONSIDERED

A person may report relief even when a measured body function changes little. Both observations deserve careful interpretation.

QUESTION TO BE CARRIED FORWARD

Which outcome was measured? Were expectations, comparison conditions and individual variation considered?

The report of comfort and the report from the lungs are both retained.

OBSERVATION / HEALING

Better has two meanings here

Feeling relief and improving a body function can differ.

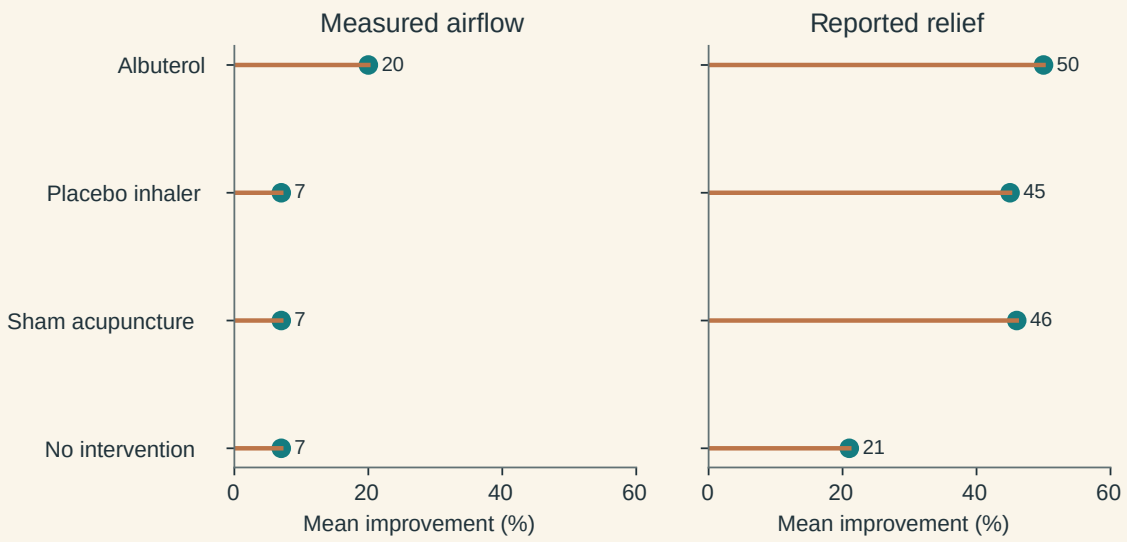


FIGURE 10 / Results from an asthma study: 39 people completed all conditions. Markers show average change. Airflow was measured with a breathing test. Error bars are not shown. [22]

QUESTION

Can reported relief differ from a measured bodily change?

TEST

Medicine, placebo inhaler, sham acupuncture and no intervention were compared in an asthma crossover study; 39 participants completed all conditions. [22]

RESULT

Airflow improved most with albuterol; reported relief was similar across the three treatment rituals. Group means do not predict individual outcomes. [22]

IMPLICATION

Comfort and physical outcomes should both be assessed. Expectation effects do not establish an energy field or justify replacing necessary medical treatment. [23-24]

The lungs have been invited to submit their own report.

HISTORICAL EVIDENCE / TRADITIONS

Old stories have many roots

Objects and texts show what people believed and practiced.

MESOPOTAMIA

Remedies and rituals worked side by side. A feared spirit such as Pazuzu could also protect people in their beliefs. [25-26]

EGYPT

Healing texts mixed treatments with spoken spells. Different categories were used than in modern medicine. [27]

INDIA

One ancient creation story begins with a being that divides into two. A similar story is not scientific proof. [28]

BUDDHIST TRADITIONS

The serpent Mucalinda shelters the Buddha. This is one tradition, not evidence that all religions share one source. [29]

MODERN ESOTERIC TRADITIONS

The familiar Akashic-records idea grew through Theosophy. Modern Wicca has a modern history. [30-31]

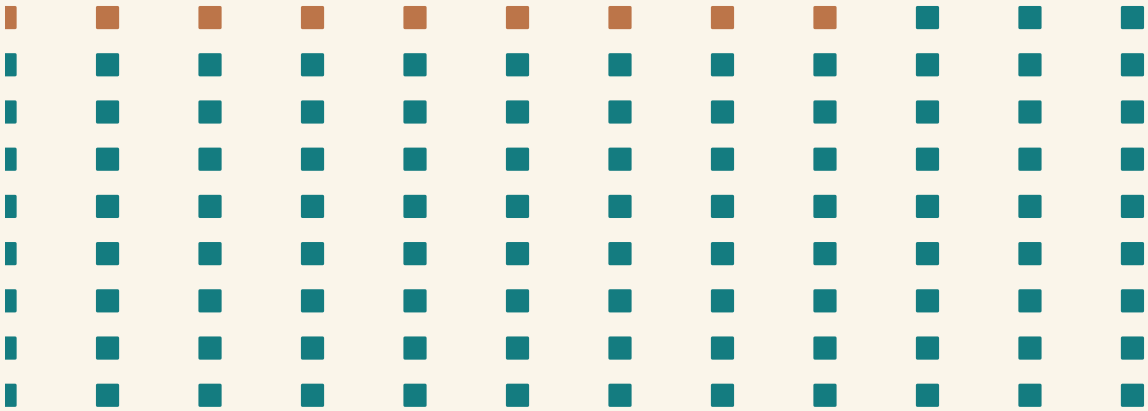
READING ROUTE / These are examples, not a family tree of all religions.

An old claim may deserve a new question.

VISUAL EXAMINATION / LESSON OPENING

A positive result needs context

The question is retained before an explanation is adopted.



108 positive tests: 9 contain gold; 99 do not

Invented arithmetic: 9 true positives and 99 false positives among 1,000 stones.

OBSERVATION TO BE CONSIDERED

A rare target can produce fewer true positives than false positives, even when a test appears impressive.

QUESTION TO BE CARRIED FORWARD

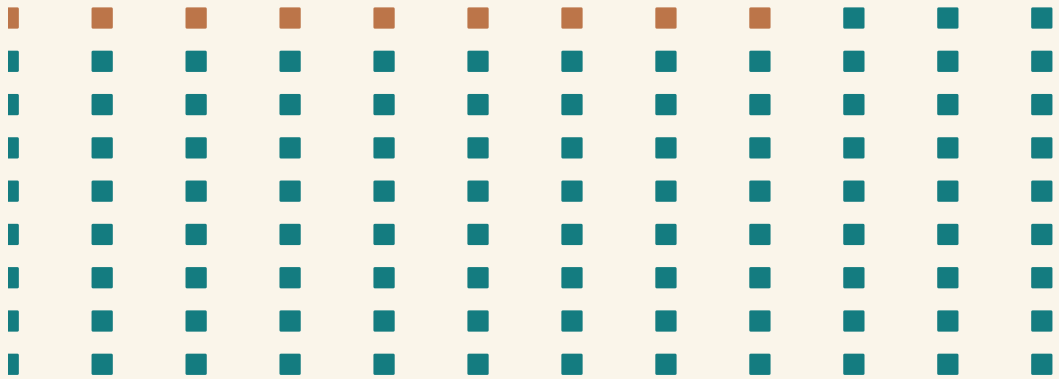
What is the target frequency? What are the sensitivity and false-positive rate? What follows when all three are considered together?

The exciting stone is not the entire sample.

MATH / A TEST CAN BE WRONG

The misses must be counted

An exciting result needs the quiet results beside it.



108 positive tests: 9 contain gold; 99 do not

FIGURE 11 / Made-up test: 10 of 1,000 stones hold gold. It finds 9 of those, but wrongly flags 99 others. Only 9 of its 108 positive results hold gold: about 8.3%.

ASSUMPTIONS

Of 1,000 stones, 10 contain gold. A test detects 90% of gold stones and falsely flags 10% of the others.

CHECK

The arithmetic is conditional on the stated rates. Real test performance must be measured in the relevant population.

PREDICTION

Nine true positives and 99 false positives are expected. Only 9 of 108 positive results contain gold: about 8.3%.

IMPLICATION

For humans, an impressive test result can still be misleading when the target is rare. Misses and false alarms must also be counted.

The success is noted. The other 99 stones would like a word.

VISUAL EXAMINATION / LESSON OPENING

The map requests more funding

The question is retained before an explanation is adopted.



The Map of Incomplete Completeness. Interpretive art from the adopted Archive parable.

OBSERVATION TO BE CONSIDERED

The map became more detailed. The number of unknowns increased. Further administrative support was requested.

QUESTION TO BE CARRIED FORWARD

Would another layer of explanation improve the model, or would a visit to the world supply the missing observation?

An excursion has been proposed. A cover page has been requested.

ARCHIVE PARABLE / THE MAP OF INCOMPLETE COMPLETENESS

The map is not finished yet

A useful map can still leave things out.



FIGURE 12 / The Map of Incomplete Completeness. Interpretive art from the Archive parable.

ARCHIVE PARABLE

Every addition to the map revealed another unknown. More funding was requested by the Department.

EVIDENCE

During a ball-counting task, a conspicuous gorilla-suited person was missed by some observers. Attention can exclude visible events. [43]

PROPOSED ACTION

An excursion into reality was suggested by an old Snake Person. A TCS report, with a cover page, was requested instead.

IMPLICATION

A representation is evaluated by its purpose and omissions. Further observation may be more useful than a more elaborate explanation.

The greatest of all faults is to be aware of none.

VISUAL EXAMINATION / LESSON OPENING

Circumstances accompany conduct

The question is retained before an explanation is adopted.



Interpretive art about attention and hurry. Experimental results are examined on the following page.

OBSERVATION TO BE CONSIDERED

A brief encounter reveals behavior under particular conditions. The surrounding history may remain unseen.

QUESTION TO BE CARRIED FORWARD

Could time pressure change the response? What experiment could separate that effect from a judgment about character?

The previous five minutes were not included in the evidence packet.

OBSERVATION / THE UNSEEN SITUATION

Five minutes are missing

The previous five minutes of a human life are rarely available for inspection.



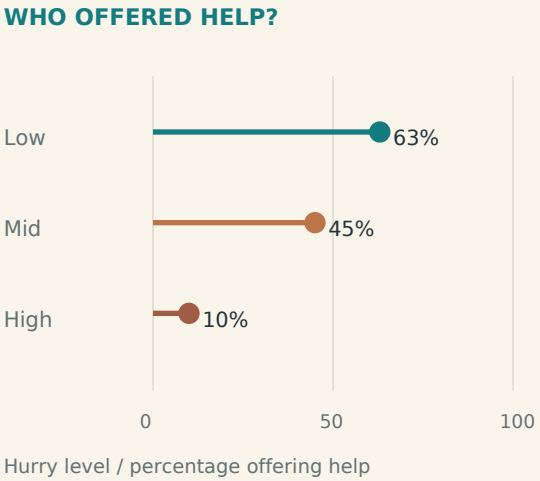


FIGURE 13 / Left: interpretive art. Right: reported helping percentages from 40 seminary students. Hurry was varied experimentally. Error bars are not shown. [42]

QUESTION

Does time pressure affect whether assistance is offered?

TEST

Forty seminary students were assigned different levels of hurry before passing a person who appeared to need help. [42]

RESULT

Help was offered by 63% in low hurry, 45% in intermediate hurry and 10% in high hurry. These small groups are not universal forecasts. [42]

IMPLICATION

Human behavior should be interpreted with its circumstances. Space for attention can be protected; an unseen history should not be invented.

Archive maxim: Life is short, but there is always time for courtesy.

EVIDENCE LEDGER / WHAT EACH CLAIM HAS EARNED

Claims awaiting inspection

The Department is required to keep its labels attached.

Relations come first.

A MODEL CONNECTION

Some rule-based models build space-like networks. They do not show that boredom caused the universe. [9,34,36]

Change gives us time.

PARTLY CONNECTED

R1 orders changes. Relativity links measured time with motion and gravity. Neither proves comparison created time. [4,8,33]

Life builds order.

A KNOWN PROCESS

Life takes in energy and matter to maintain itself. Nonliving things can form order too. [13-15]

The universe keeps records.

A LIMITED RESULT

Quantum models preserve information under stated rules. This does not promise a readable record of every thought or possible event. [19-21]

Awareness outlasts the body.

ARCHIVE BELIEF

The cited research does not establish awareness after brain death or show that attention chooses its survival. [9,40]

A treasured idea is still allowed to meet a difficult question.

RESEARCH REGISTER 01-12

Sources for further examination

Reference numbers identify the supporting publications. Titles open their sources.

[1] Planck Collaboration (2020)
Planck 2018 results VI Cosmological parameters
Cosmic age and model-dependent density parameters.

[2] NASA Science
Big Bang and the Evolution of the Universe
CMB, inflation and unresolved early-universe physics.

[3] NASA Science
Overview of the Universe
Early history of the universe; solar-system age about 4.6 billion years.

[4] Einstein Online
Special relativity Spacetime
Spacetime coordinates and signals.

[5] CERN and ATLAS
The Higgs boson and its discovery
2012 discovery and 2013 Nobel context; see also home.cern/science/physics/higgs-boson/.

[6] CERN Courier (2024)
An intricate web of interconnected strings
Theoretical developments and the experimental status of strings.

[7] Royal Swedish Academy of Sciences (2022)
Scientific background to the Nobel Prize in Physics
Bell inequalities, CHSH bounds, entanglement. NobelPrize.org also provides a public explanation.

[8] Einstein Online
World-line and relativity of space and time
Geometric histories; companion: /en/relativity_space_time/.

[9] Stephen Wolfram (2021 and 2026)
The Concept of the Ruliad
Read as the proponent's account. Companion essay: What Ultimately Is There (February 2026).

[10] Stefan Theisen Einstein Online
Extra dimensions and how to hide them
Compactification analogy and extra spatial dimensions.

[11] Benoit Mandelbrot (1967)
How Long Is the Coast of Britain
Fractal dimension and the question of coastline length.

[12] Gunther Kletetschka (2025)
Three-Dimensional Time A Mathematical Framework for Fundamental Physics
An unconfirmed proposal for three-axis time.

RESEARCH REGISTER 13-24

Sources for further examination

Reference numbers identify the supporting publications. Titles open their sources.

[13] Sean Carroll
From Eternity to Here FAQ
Entropy, the arrow of time and low-entropy initial conditions.

[14] Jeremy L England (2015)
Dissipative adaptation in driven self-assembly
A proposed mechanism connecting driven matter and self-organization.

[15] NASA Astrobiology
Life on Other Planets What Is Life and What Does It Need
A working definition, not a universally settled definition of life.

[16] Smithsonian Human Origins Program
Homo sapiens
Approximate 300,000-year fossil timescale for our species.

[17] Declaration signatories (2024)
The New York Declaration on Animal Consciousness
Signatories' assessment of evidence and uncertainty in animal consciousness.

[18] Daniel Kahneman and Gary Klein (2009)
Conditions for intuitive expertise
Learning conditions and the limits of subjective confidence.

[19] Leonard Susskind (2012)
Time evolution of a quantum system
Unitary evolution and conservation of distinguishability.

[20] Wojciech H Zurek (2009)
Quantum Darwinism
Environmental records of selected properties; a framework for emergence of classical behavior.

[21] Daniel Harlow (2016)
Jerusalem Lectures on Black Holes and Quantum Information
Quantum information, gravity and the black-hole information problem.

[22] Michael E Wechsler and colleagues (2011)
Active Albuterol or Placebo Sham Acupuncture or No Intervention in Asthma
Asthma study: 46 enrolled, 39 completed. See the healing lesson.

[23] NCCIH
Placebo Effect
Expectations and therapeutic context.

[24] NCCIH
Reiki
Evidence limits and lack of evidence for the proposed energy field.

RESEARCH REGISTER 25-36

Sources for further examination

Reference numbers identify the supporting publications. Titles open their sources.

[25] The Metropolitan Museum of Art
Cuneiform tablet Gula incantation
Artifact and curatorial explanation of Mesopotamian healing.

[26] The Metropolitan Museum of Art
Pazuzu Beyond Good and Evil
Protective uses of Pazuzu against Lamashtu.

[27] University College London Digital Egypt
Healing papyri
Ancient Egyptian categories and modern medicine-magic distinctions.

[28] Brihadaranyaka Upanishad 1.4.3
English translation with Sanskrit text
A creation narrative of an original being dividing into two.

[29] The Metropolitan Museum of Art
Buddha Sheltered by a Naga
The serpent Mucalinda in Buddhist iconography.

[30] Alex Nash (2020)
The Akashic Records Origins and Relation to Western Concepts
History of the Theosophical reinterpretation of akasha.

[31] Cambridge University Press
Gerald Gardner and the Creation of Wicca
Historical study of a modern religious synthesis.

[32] BIPM
SI unit: metre
Exact SI value of the speed of light in vacuum.

[33] Einstein Online
From light clocks to time dilation
Inertial observers, light speed and elapsed time.

[34] Wolfram Research
RegionDimension
Intrinsic dimensions of points, curves, surfaces and solids.

[35] Physics FAQ, hosted by UC Riverside
Is the speed of light everywhere the same?
Local measurement, material media, phase speed and coordinate speed.

[36] Eric W Weisstein, Wolfram MathWorld
Four-dimensional geometry
Mathematical extension beyond three spatial coordinates.

RESEARCH REGISTER 37-49

Sources for further examination

Reference numbers identify the supporting publications. Titles open their sources.

[37] Richard Fitzpatrick, University of Texas
Tensor Fields
Tensor fields; scalar and vector cases.

[38] Markus Poessel, Einstein Online
From force to field
Fields and the metric description of spacetime geometry.

[39] Einstein Online
Gravity: from weightlessness to curvature
The relationship between gravitational effects and spacetime curvature.

[40] David M Greer and colleagues (2023)
Pediatric and Adult Brain Death / Death by Neurologic Criteria Consensus Guideline
Medical consensus on permanent loss of brain function and careful clinical determination.

[41] National Eye Institute / NIH (2020)
Envision color: activity patterns in the brain are specific to the color you see
First-party report on cone signals, visual processing and human color perception.

[42] John M Darley and C Daniel Batson (1973)
From Jerusalem to Jericho: A study of situational and dispositional variables in helping behavior
Original study: 40 seminary students; hurry and helping.

[43] Daniel J Simons and Christopher F Chabris (1999)
Gorillas in our midst: sustained inattentional blindness for dynamic events
Original experiments on attention and missed events.

[44] UC Museum of Paleontology, Berkeley
The real process of science
Scientific inquiry is iterative and follows multiple paths.

[45] NGSS (2013)
Appendix F: Science and Engineering Practices
Developing models, deriving predictions and evaluating evidence.

[46] Richard Lange and colleagues (2021), PTB
Improved limits for violations of local position invariance from atomic clock comparisons
Clock comparisons constrain variation of dimensionless fundamental constants.

[47] Jack Stone and Jay Zimmerman, NIST
Index of Refraction of Air
Air refractive index depends on wavelength and atmospheric conditions.

[48] SCHOTT
Optical Glass Datasheet: N-BK7
Representative crown-glass indices vary with wavelength.

[49] Allan H Harvey (2024), NIST
Index of Refraction of Liquid Water
Water indices calculated from the IAPWS formulation.

METHODS / FOR CLOSER INSPECTION

How the pictures were made

A chart can be clear, handsome and still need a source.

SHAPES AND RULES

The opening model plate shows common scientific practices, not a fixed recipe. Figures 1, 2 and 4 are mathematical constructions. The hypercube has 16 vertices and 32 edges, projected onto the page. R1 adds one distance unit per step. Figure 3, the field panels and the Ruliad network explain ideas; they are not measured maps.

THE COSMIC BUDGET

Figure 5 uses rounded Planck 2018 base-Lambda-CDM values: ordinary matter = 0.0224 / 0.674 squared, or 4.9%; total matter = 31.5%; other matter = 26.6%; dark energy = 68.5%. Other matter includes a small neutrino share. Radiation is negligible at this rounding. [1]

WAVES AND BELL TESTS

Figure 6 uses v = c/n, with representative indices 1, 1.0003, 1.333 and 1.517. [47-49] Figure 7 shows an example wave and the CHSH limits 2 and 2 sqrt(2). These are calculated values, not a new experiment.

PEOPLE AND PROBABILITY

Figure 10 uses rounded study averages; Figure 13 uses reported helping percentages. Neither shows error bars. Figure 11 is invented arithmetic: 9 true positives plus 99 false positives. [22,42]

ART AND LIMITS

Figures 8, 9 and 12 explain ideas. The cover and interior illustrations are interpretive art, not observations. For each figure: what was measured, what was assumed, and what was omitted?

The illustrations are complete. Further observations are permitted.

FIELD NOTES / NO SPECIAL RANK REQUIRED

A question may be entered

A claim can be examined without permission from the claim.

WHAT QUESTION IS BEING EXAMINED?

WHAT HAS BEEN OBSERVED OR MEASURED?

WHAT MODEL AND ASSUMPTIONS ARE PROPOSED?

WHAT RESULT IS PREDICTED?

HOW WILL THE PREDICTION BE TESTED?

WHAT REVISION OR FURTHER TEST IS REQUIRED?

An unfinished explanation is eligible for further examination.