

# The Intelligibility Gap

Modelability, Agency, and the Illicit Leap from Cosmic Order to God

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## Central claim

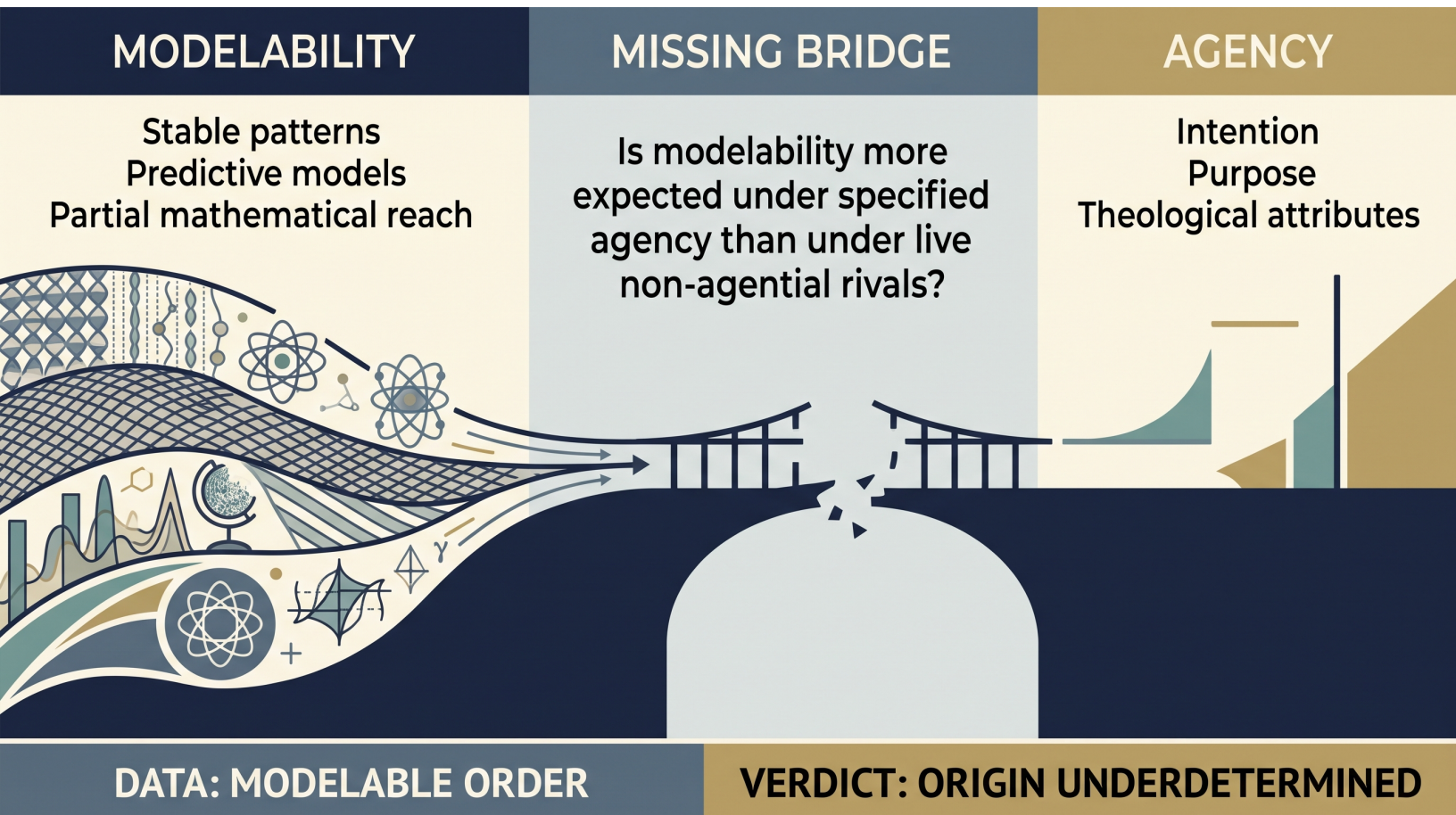
Stable, mathematically tractable patterns make the universe modelable; they do not by themselves show that it was produced or addressed by a mind. To support a specified agential hypothesis, the argument must show that modelability is more expected under that agency than under live non-agential rivals and must not count both transparency and opacity as equally confirmatory. Modelability remains philosophically significant, but its origin is underdetermined by modelability alone.

## Preview:

| Observed datum                                              | Illicit conversion                                              | Missing bridge                                                                                           | Calibrated conclusion                                                 |
|-------------------------------------------------------------|-----------------------------------------------------------------|----------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------|
| Many domains yield stable, compressible, predictive models. | Modelable order is redescribed as intentionally authored order. | Show that the datum is more expected under a specified agency than under identified non-agential rivals. | Order constrains explanations but does not alone identify its origin. |

*The target is the inference from modelability alone, not every cumulative case for theism or every metaphysics of laws.*

## Visual preview:



*The broken bridge separates real modelability from the stronger claims of intention, purpose, and theology. The graphic depicts the evidential burden; it does not rule out an agential explanation.*

### Abstract

The universe is modelable to a remarkable degree. Across many domains, stable patterns can be compressed into mathematical structures that support explanation and prediction. This fact invites a further interpretation: perhaps an intelligible world is best explained by a rational mind. The interpretation is possible, but possibility is not yet evidence. This paper separates three claims often compressed into “cosmic intelligibility”: structural modelability, human cognitive access, and intentional address. The first is a feature of successful inquiry; the second concerns the fit between some human capacities and some accessible regularities; the third attributes those regularities to agency. Neither of the first two entails the third.

The paper then supplies the missing evidential test. Let the observed modelability be the datum, and compare a specified agential hypothesis with specified live non-agential rivals against shared background information. The datum favors agency only if it is more expected under the agential hypothesis than under those rivals. Appeals to laws, simplicity, mathematical beauty, or a general fit between mind and world do not establish this comparison merely by redescribing the datum as design. The metaphysics of laws remains contested; mathematics can represent structure without functioning as a signature; observer selection limits what observers could encounter without fully explaining why the world has its particular structure; and local opacity matters only when a hypothesis predicts transparency.

The conclusion is bounded. Modelability is philosophically important, and a cumulative theistic case may add independent premises about value, consciousness, contingency, or ultimate explanation. Yet modelability alone neither entails agency nor supplies the likelihood advantage needed to identify an intentional source. Without that bridge, the rational verdict is not that agency is false but that the origin of modelable order remains underdetermined.

**Keywords:** intelligibility; modelability; laws of nature; mathematics; agency; theism; likelihood; philosophy of religion

## 1 The Datum and the Target

Modern inquiry succeeds partly because many physical systems exhibit stable relations across changes of place, time, and experimental arrangement. Those relations can often be expressed compactly, combined with measurements, and used to anticipate new observations. The fit is neither universal nor effortless. Models idealize; parameters must be estimated; chaotic systems can be governed yet predictively difficult; and some domains resist unification. Still, enough structure is accessible for cumulative science to be possible. Call this feature *modelability*: the availability of stable, compressible, at least partly predictive representations of worldly patterns.

Modelability is a deliberately modest description. It does not assume that equations literally govern events, that every feature of reality is mathematical, or that current models reveal the world’s complete furniture. An empiricist may regard a theory’s success as empirical adequacy rather than literal disclosure of unobservables (Fraassen 1980). A realist may take mature models to disclose genuine structure. Both can recognize the datum before deciding what it ultimately means.

The argument examined here moves beyond recognition to origin. It begins with the order found in nature and concludes that a mind intended or authored it. At its strongest, the conclusion is not merely that *some* intelligence is compatible with the world. It identifies a specified personal source and may add purpose, goodness, knowledge, power, or concern for knowers. This paper uses *God-concept* for any such specified conception of a deity. A thin claim that “something mind-like” lies behind order is easier to fit to the datum, but the fit is partly purchased by withholding content. A richer God-concept says more and therefore assumes a larger evidential burden.

The target is the move from modelability *alone* to agency. The qualification matters. Foster develops a serious lawgiver account in which the existence and regularity of laws ultimately point toward theism

(Foster 2004); Swinburne embeds order within a wider Bayesian case involving simplicity and background evidence (Swinburne 2004). Those arguments may draw upon premises beyond the datum defined here. The narrower question is whether the world's being modelable already identifies the kind of source from which it came.

Two conclusions must not be confused. An agential explanation can be *possible*: a rational source could choose a structured world. It can also be *avored*: the observed structure could be more probable under that source than under relevant alternatives. Only the second relation supplies comparative evidence. The remainder of the paper explains why the first is often established while the second is assumed.

## 2 Three Claims Called Intelligibility

The word *intelligible* moves too easily among distinct claims. Separating them prevents a genuine feature of inquiry from inheriting a theological conclusion by verbal association.

### 2.1 Structural modelability

The first claim concerns the object investigated. A domain is structurally modelable when its behavior exhibits stable enough regularities for a representation to compress observations and support successful expectations. The representation need not be exact or final. Newtonian mechanics remains extraordinarily useful within a restricted range even though relativity and quantum theory alter its fundamental standing. Modelability therefore comes in degrees and can be local: a world may contain islands of tractable order, interactions that demand statistical treatment, and systems whose practical behavior outruns prediction.

### 2.2 Cognitive access

The second claim concerns investigators. Human beings possess perceptual, linguistic, numerical, and social capacities that can be extended through instruments and institutions. Some of those capacities match some accessible regularities. Scientific success depends on this fit, but the fit is not transparent access to everything. We select learnable problems, build notation, discard unsuccessful representations, pool labor, and inherit results across generations. Cognitive access is therefore a relation among worldly patterns, embodied agents, and historical practices, not simply a mirror between an isolated mind and reality.

### 2.3 Intentional address

The third claim attributes a communicative or purposive relation. A world is intentionally addressed to knowers if an agent arranged its structure so that it could be recognized, used, or understood. This is much stronger than structural modelability. A sequence can display a pattern without being a message; a crystal can instantiate symmetry without communicating; an algorithm can detect compressibility in data whose source was not trying to be understood. Intentional address requires facts about a source's aims, not only facts about the product.

Table 1 does not deny relations among the claims. Intentional address would normally produce some kind of accessible structure. The mistake is reversing that implication without argument. Smoke may be produced by a signal fire, but smoke alone does not identify a signal; a contrast with lightning, accident, industry, and other sources is needed. Likewise, modelability can be a consequence of design without every instance of modelability being evidence sufficient to identify design.

| Claim                   | What it asserts                                                        | What can establish it                                                         | What does not yet follow                           |
|-------------------------|------------------------------------------------------------------------|-------------------------------------------------------------------------------|----------------------------------------------------|
| Structural modelability | Some patterns admit stable, compressible, predictive representation.   | Successful models across observations and interventions.                      | That a mind intended the patterns.                 |
| Cognitive access        | Some investigators can discover and use some of those representations. | Records of learning, prediction, correction, and institutional extension.     | That the fit was arranged for those investigators. |
| Intentional address     | An agent structured the domain to be understood or used.               | Independent source evidence or a discriminating comparison with alternatives. | A specific theology without further premises.      |

Table 1: Three claims often compressed into the language of cosmic intelligibility.

### 3 Law Without a Legislature

The vocabulary of “laws” encourages a familiar analogy. Human laws are prescriptions issued or sustained by authorities; laws of nature therefore sound like prescriptions requiring a cosmic legislator. But a shared noun does not establish a shared ontology. In science, a law may name a stable regularity, a counterfactual-supporting relation, a feature of a best system, a manifestation of powers, or a primitive modal fact. None of these views is settled merely by calling the relation a law.

A non-governing account treats laws as features of the best organized description of the world’s total pattern. Beebe defends this Humean orientation and explains how lawhood can be understood without relations that push events from outside the pattern (Beebe 2000). Lange develops a non-agential account in terms of a stable set of truths under counterfactual suppositions (Lange 2009). Other philosophers defend governing relations, dispositional powers, or primitivism. The present argument need not choose among them. Its point is conditional: even if laws govern, *personal* government is an additional claim. Necessitation, modal stability, or dispositional production is not yet intention.

This pluralism blocks two equal and opposite shortcuts. Skeptics should not announce that laws are “nothing but descriptions” as if law metaphysics were closed. Agential theorists should not treat the legal metaphor as if it had already supplied a lawgiver. The relevant work must be done by features that distinguish personal authorship from nonpersonal modal structure.

Foster’s challenge deserves more than dismissal by etymology. If regularities cannot ground induction on their own, and if a divine lawmaker would explain their continuation, a personal source may appear to add explanatory depth (Foster 2004). But the proposal still faces specification. Which attributes of the source predict these laws rather than countless alternatives? Why should the source maintain uniformities accessible to limited knowers? How much probability do the non-agential accounts receive before the datum? Naming an intentional sustainer can relocate these questions unless independent information constrains the source’s aims.

The lawgiver inference therefore cannot be won at the level of metaphor. Scientific lawfulness is part of what requires explanation. Whether its best explanation is Humean pattern, modal stability, powers, a primitive, agency, or a combination depends on comparative virtues and costs: scope, fit, independent motivation, simplicity, and the extent to which each view expects this world rather than merely accommodates it.

## 4 The Missing Comparative Bridge

Evidence is contrastive. A footprint favors one animal over another only insofar as its shape and setting are more expected if the first animal passed than if the second did. The fact that either animal *could* have left a mark is not enough. Sober emphasizes this likelihood structure: evidence discriminates hypotheses through differences in how probable the observation is under each (Sober 2008). Swinburne’s own account likewise evaluates a hypothesis partly by how expected the evidence would otherwise be and by its fit with background knowledge (Swinburne 2004).

Let the datum be the degree and distribution of observed modelability. Let the agential hypothesis specify enough about a proposed source’s capacities and aims to generate expectations. Let a non-agential rival identify an actual alternative rather than a catchall negation. Finally, hold shared background information fixed. The datum favors the agential hypothesis over that rival only if it is more probable under the former than under the latter. A claim that “a rational source could create an orderly world” establishes compatibility. It does not establish the required inequality.

This is the intelligibility gap. On the near side stands real evidence: stable patterns, effective models, and investigators able to use them. On the far side stand intention, purpose, and theological attributes. The bridge requires at least three supports:

- **Specification:** enough content about the proposed agent and rival to yield different expectations.
- **Discrimination:** some feature of the observed order that is appreciably more expected under one account.
- **Calibration:** a rule that does not treat any possible mixture of clarity, complexity, beauty, and opacity as favorable after observation.

### The Modelability-Alone Argument

- P1.** Modelability supports a specified agential origin only if it entails that origin or is more expected under that agential hypothesis than under relevant non-agential rivals, given shared background information.
- P2.** Observed modelability does not entail an agential origin: patterns, laws, powers, or modal structure can be described without intention.
- P3.** Modelability alone does not specify the agent, the rivals, or a discriminating difference in their expectations, so it does not establish the required comparative advantage.
- P4.** Therefore observed modelability alone does not warrant the conclusion that its origin is agential.

The inference is deductively valid if the premises are granted. Its conclusion concerns warrant from one datum, not the falsity of agency. New evidence could supply the missing bridge. For example, a highly specific, independently identifiable message encoded in fundamental structure might change the comparison. A wider cumulative case might constrain the source’s motives before the order is inspected. But once those additions do the work, modelability is no longer operating alone.

Inference to the best explanation does not remove this burden. Lipton’s account treats explanatory comparison as an assessment among alternatives, not a license to stop at the first intelligible story (Lipton 2004). Saying that agency “explains why there are laws” matters only if it explains them better after its flexibility, added commitments, and rival accounts are included. A hypothesis capable of accommodating any lawlike world may purchase breadth at the cost of predictive sharpness.

## 5 Mathematics: Wonder Without Automatic Authorship

Wigner’s classic discussion of the effectiveness of mathematics gives the puzzle its enduring force (Wigner 1960). Mathematical structures developed in one setting can later organize apparently distant physical phenomena. Compact formalisms sometimes predict entities or relations not yet observed. The success is not exhausted by the banal statement that investigators keep successful tools: the range, precision, and cross-domain reuse of mathematics remain philosophically striking.

Yet effectiveness does not carry one metaphysics on its face. Mathematics contributes to science through representation, abstraction, derivation, measurement, and the exploration of structural consequences. Pincock shows how mathematical representation can perform substantive epistemic work without requiring a simple identity between physical reality and a mathematical object (Pincock 2012). Successful application therefore supports claims about represented structure and inferential reliability. It does not automatically support a claim about who, if anyone, selected the structure.

Selection effects operate within inquiry as well. Scientists preferentially study tractable regularities, retain formalisms that work, refine measurement to reveal stable relations, and describe recalcitrant systems at scales where patterns emerge. These practices do not explain the existence of every regularity; without worldly constraint, no amount of selection would make false models predict successfully. They do explain why the mathematics visible in mature science is not a random sample of every attempted mapping between form and world.

Steiner presses a stronger, explicitly theistic challenge. He argues that the usefulness of mathematics can appear anthropocentric because physicists employ structures developed through human criteria and analogies, yet those structures disclose nature (Steiner 1998). This pressure should be taken seriously. It raises the probability question rather than answering it. A specified agential view must say why a source with the attributed aims would realize this degree and kind of human-accessible structure. A non-agential view must say why evolved and culturally extended investigators can latch onto stable features. The datum bears on both stories only through their relative expectations.

Mathematical beauty is similarly delicate. Symmetry, unification, compression, and generative simplicity can be evidential virtues because they guide successful inquiry. But aesthetic judgments are partly trained by success, and candidate theories can trade elegance in one representation for complexity in another. If beauty is evidence of intentional artistry, the expected aesthetic must be specified before all realized structure is declared beautiful. Otherwise irregularities become “rich complexity,” inaccessible mathematics becomes “transcendent depth,” and every result is absorbed.

The disciplined conclusion preserves the wonder. Mathematics gives finite investigators extraordinary reach into patterns they did not create. That is a real explanatory demand. What it does not provide by itself is a maker’s mark. The movement from structural correspondence to authorship still crosses the comparative bridge.

## 6 What the Datum Leaves Open

Modelability is neither total nor absent. General relativity describes gravitation with exceptional scope, yet its union with quantum theory remains unsettled. Quantum models are predictively powerful while their interpretations disagree about what the formalism says reality is like. Turbulence, biological organization, and complex social systems permit models of varying range without yielding complete prediction. These examples do not show that the world is unintelligible. They show why the evidential datum must include the *distribution* of tractability and opacity rather than a selectively idealized picture.

Opacity is not automatic evidence against generic theism. A personal source might value discovery, creaturely limits, regular autonomy, or goods unavailable under immediate transparency. But those

replies illustrate the calibration problem. If accessibility supports agency because a rational source would communicate, while inaccessibility also supports agency because the same source would hide, then neither outcome discriminates unless the aims were constrained independently. The correct verdict is not “opacity refutes agency” but “opacity tests only hypotheses that antecedently predict greater transparency.”

Observer selection supplies another limited point. Observers capable of sustained inquiry can arise only in environments with enough stability for persistence, learning, and action. We should therefore not be surprised to observe at least the minimum order required for observers. This does not explain why any observer-supporting world exists, why its laws take their actual form, or why its mathematics reaches beyond immediate survival tasks. It lowers the evidential force of treating *all* observed regularity as an unconstrained surprise. It is a scope constraint, not a complete origin story.

The non-agential side is also plural. Humean mosaics, primitive laws, dispositional powers, mathematical structuralism, cosmological proposals, and brute modal facts are not one hypothesis with one probability. Nor can “naturalism” be treated as a blank contrast class that predicts chaos. Each serious comparison requires a specified rival. Lange’s stability account and Beebe’s non-governing conception, for example, explain lawhood differently and incur different commitments (Lange 2009; Beebe 2000). Defeating one would not defeat all.

Hume’s critique of design inference remains relevant because effects constrain causes only to the extent of the observed analogy; richer claims about unity, perfection, or moral attributes do not simply arrive with order (Hume 1998). Oppy’s treatment of teleological arguments similarly emphasizes the importance of alternatives and the difficulty of showing that theism wins the total comparison (Oppy 2006). The gap widens as a conclusion becomes more specific. Modelability may be compatible with a mind, a simulation, a plurality of agents, an indifferent designer, or a rich God-concept, but compatibility does not rank them.

Underdetermination is not intellectual surrender. It identifies where future argument must work. Better specification of agential aims, independent evidence about a source, distinctive features of laws, or a defensible probability model could change the verdict. The claim is that observed modelability, taken without those additions, leaves multiple origins live.

## 7 The Strongest Agential Replies

### 7.1 A rational source predicts rational order

The most direct reply says that reason naturally produces order, whereas non-agential reality has no reason to be orderly. The first half is plausible only at a high level. Rational agents can produce codes, gardens, games, noise, redundancy, obstacles, and structures calibrated to many ends. Until the source’s ends are specified, “rational order” covers a vast space. The second half assigns disorder to non-agential accounts without argument. Powers, stable modal relations, or mathematical structures do not predict chaos merely because they lack intentions. The reply begins a comparison but does not complete it.

### 7.2 Laws require a lawgiver

If “require” expresses conceptual entailment, plural theories of laws deny it. If it expresses inference to the best explanation, the proposal must be compared with those theories. A lawgiver may unify why regularities continue, but the view adds a personal reality and facts about its choice. Foster’s proposal is valuable precisely because it attempts the deeper argument rather than resting on the word *law* (Foster 2004). Its success depends on whether divine agency improves the full explanatory balance, not on legislative grammar.

### 7.3 The fit between mind and world is otherwise surprising

Human success outruns what any single organism achieves unaided. But “the human mind” in science includes evolved perception, social learning, external notation, instruments, selective retention, and centuries of correction. These processes presuppose stable features to exploit, so they do not dissolve the origin question. They do weaken the image of an unprepared intellect mysteriously matching the whole cosmos. The remaining excess—especially mathematics that later acquires unforeseen application—is a serious datum. Steiner shows why an agential interpretation can be tempting (Steiner 1998). The comparative question remains whether that excess is more expected under specified intentions than under cultural exploration of a structured world.

### 7.4 Ultimate explanation is not prediction

An agential theorist may reject probabilistic language and seek a sufficient reason: personal explanation terminates a regress that impersonal facts cannot. This changes the argument. It may motivate a general metaphysics of explanation, contingency, or reason, but modelability no longer supplies the conclusion by itself. Moreover, a personal stopping point faces its own question: why this source, these intentions, and this structured effect? A theory may reasonably treat some facts as basic. What requires defense is why personal agency is a better terminus than primitive modal or structural facts.

### 7.5 Modelability belongs to a cumulative case

This is the strongest limitation on the paper’s conclusion. Evidence for consciousness, moral value, contingency, religious experience, or historical claims might constrain an agential hypothesis before modelability is considered. In that setting, the order datum could make an incremental contribution even if it cannot carry the conclusion alone. Swinburne’s project explicitly has this cumulative form (Swinburne 2004). The appropriate response is not to deny the architecture but to demand transparent accounting: which independent premises specify the God-concept, how modelability changes the comparison, and whether the same feature has already been counted under another description.

A cumulative case is not automatically stronger than its parts. Correlated considerations can double-count one datum: lawfulness, mathematical elegance, predictability, and cognitive access may be several aspects of the same modelability. Conversely, independent lines can genuinely reinforce one another. The paper’s result is therefore a rule for cumulative reasoning, not a rejection of it. Name the prior supports, state the incremental role of order, and preserve a possible outcome that would have fitted the agential view less well.

## 8 A Disciplined Evaluation Test

The practical question is how to evaluate an intelligibility argument without demanding impossible numerical precision. Exact probabilities are rarely available in metaphysics. Comparative discipline is still possible. The proponent can specify the datum, identify alternatives, state directional expectations, and expose the view to outcomes that would count less favorably.

This protocol permits qualitative comparison. One may argue, for instance, that highly general mathematical regularities are modestly more expected if a source values discoverability. But the argument must then defend that value attribution and ask whether observer selection, stable non-agential laws, and scientific selection already make the pattern reasonably expected. The word *modestly* acknowledges uncertainty; it does not replace reasons.

The protocol also prevents conclusion drift. Evidence for some agency is not automatically evidence for one deity, and evidence for a source of laws is not automatically evidence for moral perfection or

| Question                      | Why it matters                                                        | Adequate answer                                                 | Warning sign                                                                |
|-------------------------------|-----------------------------------------------------------------------|-----------------------------------------------------------------|-----------------------------------------------------------------------------|
| What exactly is the datum?    | Prevents selective use of only elegant successes.                     | Includes scope, limits, locality, and opacity.                  | “The universe is intelligible” without a measurable or comparative content. |
| Which agency is proposed?     | Capacities and aims determine expectations.                           | A specified source with independently motivated attributes.     | A thin mind for prediction, followed by a rich theology in the conclusion.  |
| Which rivals are live?        | Evidence ranks alternatives rather than a hypothesis against nothing. | At least one developed non-agential account and its costs.      | “Chance” or “chaos” used as the only contrast.                              |
| What differs in expectation?  | Compatibility alone cannot discriminate.                              | A feature more expected on one account, with reasons.           | Repeating that an agent could create order.                                 |
| What would fit less well?     | Protects the comparison from absorbing every outcome.                 | A stated range or pattern that lowers the view’s support.       | Both transparency and opacity treated as confirmation.                      |
| What does the conclusion add? | Rich conclusions require additional support.                          | Each theological attribute is traced to evidence or background. | Purpose, goodness, or revelation inferred from modelability alone.          |

Table 2: A non-numerical protocol for testing an inference from modelability to agency.

personal revelation. Each added attribute narrows the hypothesis. Narrower hypotheses can explain more specifically, but they also risk more and require more support.

Finally, the test separates explanatory satisfaction from evidential success. A personal story can feel more complete because intentions answer “why” questions familiar from human action. That psychological and explanatory attraction is worth noting. It is not itself a likelihood comparison. The best argument will show why the source is independently constrained, why the datum follows with greater expectation, and why rival explanations bear costs not merely stipulated by the proponent.

## 9 Conclusion

The universe’s modelability is a profound fact about our epistemic situation. Stable patterns can be represented, mathematics can extend inquiry far beyond unaided perception, and communities of finite investigators can correct and accumulate knowledge. Nothing in the skeptical argument requires reducing these achievements to convention or denying the reality of the structures they track.

The error lies in moving directly from modelability to authorship. Structural modelability, cognitive access, and intentional address are different claims. The metaphysics of laws offers personal and nonpersonal possibilities. Mathematical effectiveness constrains explanation but carries no automatic signature of agency. Observer selection limits the surprise of finding some usable regularity, while incomplete access tests only hypotheses that predict greater transparency. Across these issues, the same principle holds: compatibility is not comparative support.

For modelability to favor a specified agential hypothesis, the observed pattern must be more expected under that hypothesis than under identified live non-agential rivals, relative to shared background information. That bridge may be built by a richer cumulative argument, independent evidence about a source, or a distinctive feature of the order. Modelability alone does not build it.

The calibrated conclusion is therefore neither that agency has been disproved nor that cosmic order is philosophically mute. Order narrows the space of adequate explanations and gives every view work to do. What it does not do, without further premises, is identify its origin. The intelligibility gap remains the distance between a world we can partly model and a source we have not yet discriminated.

## A Formal Reconstruction of the Central Thesis

### A.1 Syllogistic reconstruction

1. If observed modelability by itself warrants a specified agential origin, then modelability either entails that origin or establishes that the observation is more expected under the specified agential hypothesis than under relevant non-agential rivals, given shared background information.
2. Observed modelability does not entail an agential origin, because modelable structure is logically compatible with nonpersonal laws, powers, modal facts, and patterns.
3. Modelability by itself does not specify the attributes and aims of the proposed agent, the relevant non-agential rivals, or the difference between their expectations; it therefore does not establish the required comparative advantage.
4. Therefore observed modelability by itself does not warrant a specified agential origin.

The inference is valid as a necessary-condition argument. Premise 1 allows two routes from the datum to the conclusion: entailment or comparative evidential support. Premise 2 closes the entailment route without assuming that non-agential accounts are true. Premise 3 closes only the modelability-alone route to comparative support; independent information could specify the hypotheses and establish a likelihood difference. The conclusion therefore concerns the evidential sufficiency of one datum, not the metaphysical possibility or falsity of agency.

### A.2 Symbols

- $E$ : the observed degree and distribution of cosmic modelability.
- $A$ : a specified agential hypothesis, including attributes relevant to its expectations.
- $N$ : a specified live non-agential rival.
- $B$ : shared background information held fixed in the comparison.

### A.3 Symbolic comparison

The likelihood test can be expressed as follows:

$$[\Pr(E \mid A, B) > \Pr(E \mid N, B)] \rightarrow \text{Favours}(E, A, N, B).$$

If the two likelihoods are equal, the datum does not discriminate between the hypotheses. If the first is smaller, the datum favors the non-agential rival in that pairwise comparison. The formal statement does not assign numerical values. It identifies the relation that any qualitative or quantitative defense must justify. A complete posterior comparison would also consider prior probabilities, but modelability alone supplies neither priors nor the likelihood inequality.

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