

The Alleged Resurrection and Bayesian Variables

Priors, Likelihoods, Dependence, and the Cost of a Specific Miracle Claim

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Central claim

A public Bayesian case for Jesus’ bodily resurrection cannot draw decisive force from compatibility or accumulation alone. It must independently constrain the prior for the specific miracle claim, compare the joint likelihood of the evidence with a weighted mixture of serious alternatives, model dependence among reports, and justify the proposed deity’s disclosure policy. Common presentations leave those variables underdetermined or multiply correlated evidence as though it were independent; the surviving record therefore does not establish the Bayes factor needed for posterior superiority. This diagnoses the public argument, not the occurrence’s bare possibility.

Preview: The variables must carry the conclusion

Starting claim

Several historical items fit bodily resurrection.

Required comparison

Ask how much more expected their joint record is under that specific claim than under a weighted alternative mixture.

Accounting pressure

The prior, divine intent, witness reliability, source dependence, and alternative weights remain disputed.

Rational conclusion

The evidence may support sincere Easter belief without establishing the posterior claimed for bodily resurrection.

The argument neither assigns a universal numerical prior nor treats testimony as worthless. It asks what a public case must specify before a numerical or comparative conclusion is warranted.

Visual preview:

Bayesian Accounting: The Probabilistic Debt of Miracle Claims

This infographic outlines a “Bayesian accounting audit” of the resurrection claim. It moves beyond simple “fit” to examine how prior decomposition, specificity costs, and source dependence affect the final posterior probability of a unique historical miracle.

THE PRIOR BURDEN: DECOMPOSITION & SPECIFICITY



Theism ($P(T)$)
Divine Intent ($P(J | T)$)
Specific Signaling ($P(R | T, J)$)

The resurrection is a layered hypothesis requiring separate probability for theism, divine intent, and specific signaling.

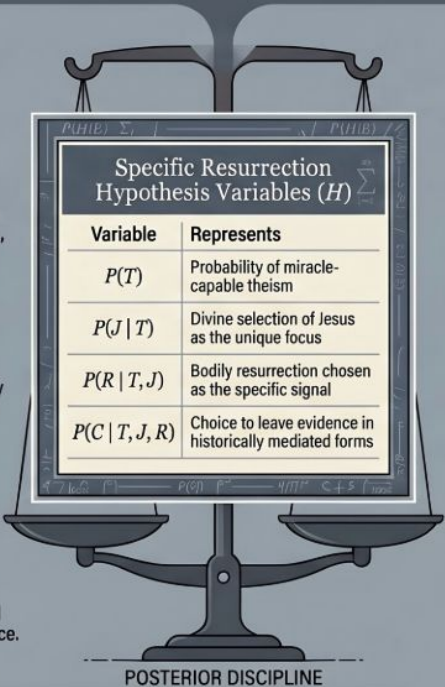


Generic Theism
1st Century Judean Miracle

The Specificity Cost
Every narrowing—from generic theism to a specific first-century Judean miracle—must be “paid for” in probability.



Theological Elasticity
A hypothesis that predicts both clarity and ambiguity with equal ease loses its discriminating force.



POSTERIOR DISCIPLINE

THE EVIDENCE AUDIT: LIKELIHOOD & DEPENDENCE



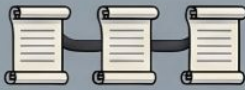
Compatibility
(High St with hypothesis, but also natural alternatives)

Likelihood
(Uniquely expected evidence)

Evidence must be uniquely expected under resurrection compared to natural alternatives to move the needle.

Source Dependence Correction

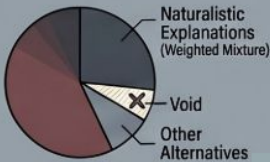
Correlated traditions (e.g., Synoptic Gospels) must be discounted; they are not independent “beams” of support.



Correlated Traditions
(e.g., Synoptic Gospels)

The Complement Mixture

The alternative to resurrection is not a void, but a weighted mixture of naturalistic explanations.



Read the image as a two-sided audit. The left decomposes broad theism into the intentions, event, and disclosure policy needed for a specific resurrection claim. The right separates fit from comparative likelihood, marks report dependence, and replaces a vague complement with a weighted mixture. Here “likelihood” means greater comparative expectedness, not literal uniqueness; “discounted” means joint modeling rather than automatic multiplication, with a model-specific correction. The diagram identifies variables to justify; it assigns no values and does not prove impossibility.

Abstract

Public arguments for the bodily resurrection of Jesus often present early proclamation, appearance traditions, empty-tomb narratives, conversions, and movement growth as converging evidence. The Bayesian question is stricter: how much more expected is their *joint* record under a specific resurrection hypothesis than under a weighted mixture of non-resurrection pathways, given the relevant background information? This paper reconstructs that comparison at the variable level.

The result is critical but bounded. The evidence can support early and sincere Easter belief, and some items may favor resurrection over particular rivals. Yet compatibility is not a Bayes factor, a broad theistic prior is not the prior of a first-century bodily resurrection, and correlated reports cannot be multiplied as independent confirmations. A defensible model must specify the deity's relevant intentions and disclosure policy, distinguish event evidence from downstream belief and narration, represent source dependence through joint conditional probabilities, and allocate weight across serious alternative combinations rather than defeat one convenient rival.

Common public cases do not supply enough independent constraints to establish the posterior superiority they advertise. Different defensible settings for prior odds, reliability, dependence, and divine intent can reverse or greatly change the result. That underdetermination does not show that the resurrection did not occur, that no testimony matters, or that Bayesian reasoning mechanically settles history. It shows that the public inference must pay its full probabilistic costs before accumulation can count as confirmation.

Keywords: resurrection; Bayesian confirmation; prior probability; likelihood; source dependence; testimony; miracle claims; alternative hypotheses; divine intention

1 The Claim Under Audit

The public dispute is not whether resurrection language can organize Christian faith. It is whether a particular historical claim is sufficiently supported for an inquirer who does not already accept the Christian story: after Jesus died, the deity specified by Christian theism restored him bodily to transformed life and intended that event, together with the surviving evidence, to identify him uniquely. That claim is much narrower than generic theism, survival after death, visionary encounter, or the sincerity of early believers.

A *God-concept* is a specified conception of a deity, including the capacities, intentions, and disclosure practices attributed to that deity. This definition matters because an undefined divine agent predicts little. A deity who seeks unmistakable public disclosure, one who prizes ambiguous faith, one who acts only rarely, and one who permits highly local evidence do not assign the same likelihood to the record we possess. Treating them as one hypothesis hides the variable that does much of the work.

The evidence also needs separation. “The resurrection evidence” commonly bundles at least four different objects:

1. claims about events, such as death, burial, an empty tomb, or appearances;
2. claims about experiences, including perceived encounters and revelations;
3. facts about belief and action, such as proclamation, conversion, or community formation; and
4. facts about later narration, including literary development, source use, and theological framing.

These objects can be historically important without being independent. An experience may cause proclamation; proclamation may stabilize a formula; a formula may shape narration; narration may strengthen later conviction. Counting every link as a fresh observation of the initiating event risks counting one causal stream several times.

Major defenses do attempt historical comparison rather than resting on bare compatibility. Swinburne constructs a probabilistic case using background theism, divine reasons, Jesus' life, and posterior

historical evidence; the McGrews explicitly frame several testimonial strands as a cumulative Bayesian argument; Licona compares resurrection with rival historical hypotheses; and Wright embeds the Easter claims in a large account of early Jewish and Christian resurrection belief (Swinburne 2003; T. McGrew and L. McGrew 2009; Licona 2010; Wright 2003). The present criticism therefore addresses serious versions of the case. Its thesis is not that defenders never compare explanations. It is that the advertised public conclusion depends on variables whose values and dependence structure are often asserted, inherited, or obscured rather than independently established.

The governing burden

To establish a public posterior advantage for bodily resurrection, an argument must supply more than facts that fit it. It must specify the exact hypothesis, its prior relative to the comparison class, the joint likelihood of the total evidence, the dependence among sources and consequences, the weighted alternatives, and the divine intentions used to make the evidence expected.

2 Bayes Makes the Burden Visible

Let B represent relevant background information, H the specific resurrection hypothesis, and E the total evidence. Posterior odds are:

$$\frac{P(H \mid E, B)}{P(\neg H \mid E, B)} = \frac{P(H \mid B)}{P(\neg H \mid B)} \times \frac{P(E \mid H, B)}{P(E \mid \neg H, B)}. \quad (1)$$

The first ratio is the prior odds: confidence before adding the evidence presently under review. The second is the Bayes factor: how much more expected the evidence is under resurrection than under its complement. Multiplication updates the starting odds by the evidence's comparative force. This is standard Bayesian bookkeeping, not a special rule designed to exclude miracles (Howson and Urbach 2006; Sprenger and Hartmann 2019).

Equation 1 blocks three shortcuts. First, a high $P(E \mid H, B)$ is not enough; $P(E \mid \neg H, B)$ also matters. Second, a favorable Bayes factor need not yield high posterior odds if the prior odds are sufficiently low. Third, a defender cannot raise the prior with background considerations and then count the same considerations again as fresh evidence.

The formula does not provide its own inputs. Bayesian probabilities represent constrained judgments, not numbers discovered by syntax. Background information, comparison classes, source reliability, and the detail at which a hypothesis is formulated all affect the result. This flexibility is not a defect unique to religious reasoning. It is why responsible Bayesian work discloses assumptions and tests sensitivity rather than presenting one opaque number as inevitable (Sober 2008; Sprenger and Hartmann 2019).

The relevant public question is therefore not, "Can someone choose values that make resurrection probable?" It is, "Which values are supported for an audience that has not already accepted the theological conclusions those values are meant to establish?" A model that reaches a high posterior only after assigning favorable numbers to contested divine intentions has restated a theological judgment in probabilistic form. It has not independently earned that judgment.

3 Specificity Without a Mechanical Penalty

The resurrection hypothesis can be decomposed into narrower commitments. Let T be miracle-capable theism, J the divine intention to identify Jesus uniquely, R the selection of bodily resurrection as the

identifying act, and C the choice to leave the historically mediated disclosure record actually under review. Then:

$$P(H \mid B) = P(T \mid B)P(J \mid T, B)P(R \mid T, J, B)P(C \mid T, J, R, B), \quad H = T \wedge J \wedge R \wedge C. \quad (2)$$

This decomposition corrects two opposite errors. The first is *prior compression*: moving from “some miracle-capable deity exists” to “this deity probably raised Jesus bodily in this historical setting and chose this evidential trace.” Because a conjunction cannot be more probable than one of its conjuncts on the same background, generic theism cannot simply donate its full probability to the complete resurrection claim.

The second error is treating specificity as an automatic fixed penalty. Equation 2 does not tell us that every conditional factor is tiny. If strong independent reasons made J , R , or C highly expected given earlier commitments, their conditional probabilities could be high. The objection is not that narrowing always makes a claim irrational. It is that each narrowing needs reasons that do not merely presuppose the Christian narrative whose truth the argument is supposed to establish.

Swinburne directly confronts this issue by offering a theory of divine reasons for incarnation and resurrection (Swinburne 2003). That is methodologically preferable to treating divine action as a blank check. It also clarifies where disagreement belongs. Critics may reject the claimed moral or theological reasons, challenge the prior for the underlying God-concept, or argue that other disclosure policies remain at least as plausible. The dispute should occur at those premises rather than disappearing inside the word “theism.”

Specificity stated carefully

A more specific hypothesis has more conditional commitments to justify. This does not prove that its prior is negligible. It does prevent the probability of a broad metaphysical position from being transferred intact to one person, event, purpose, and disclosure policy.

4 Likelihood Is Not Compatibility

Evidence favors H over a rival A when it is more expected under H than under A . The likelihood ratio is:

$$\Lambda(E; H, A, B) = \frac{P(E \mid H, B)}{P(E \mid A, B)}. \quad (3)$$

If the ratio exceeds one, E favors H over A on the stated background. If it equals one, E is neutral between them. If it is below one, it favors A . This is a claim about evidential direction, not a complete posterior verdict (Sober 2008).

Resurrection apologetics often moves from “we would expect this if Jesus rose” to “this supports resurrection.” The first clause supplies only the numerator. Early proclamation might be expected if resurrection occurred, but it can also be expected if some followers had compelling experiences and interpreted them through Jewish resurrection expectations. Sincere appearance claims might be expected if Jesus appeared bodily, but also under visionary, bereavement, revelatory, or socially reinforced experiences. A developed empty-tomb narrative might be expected after a bodily resurrection, but its likelihood must also be assessed under literary development, contested burial information, theological narration, and mixtures of these routes.

None of this sets $P(E \mid H, B)$ to zero. It asks whether the denominator is low enough for the evidence to discriminate. Earman’s criticism of simple Humean dismissals makes the same larger point from

the other side: miracle testimony should be analyzed with probability rather than rejected by slogan (Earman 2000). Bayesian discipline binds critic and defender alike. The critic may not declare an event impossible by definition; the defender may not treat fit as sufficient confirmation.

Three states must remain distinct:

- **A supported likelihood advantage:** independent reasons make the evidence more expected under H than under a specified rival.
- **A supported likelihood tie or disadvantage:** the comparison is specified but does not favor H .
- **An underdetermined likelihood:** the model can accommodate the evidence but lacks independent constraints sufficient to establish its comparative direction or magnitude.

The public resurrection argument often occupies the third state. That is weaker than disconfirmation, but it is also weaker than the posterior confidence commonly advertised.

5 The Evidence Unit Problem

A cumulative case gains force from evidence that brings genuinely additional information. Variety can help when separate routes are unlikely to produce the same misleading result. Repetition can help when sources are conditionally independent and their reliability is modeled. But several descriptions of one causal history do not automatically form several independent confirmations. Bayesian networks were developed precisely to represent such dependence among sources, reliability, testimony, and hypotheses (Bovens and Hartmann 2004).

The following ledger separates common resurrection evidence from the informational unit it may actually provide. It does not declare any item worthless. It asks which additional step must be justified before multiplication is allowed.

Table 1: A dependency-aware ledger of common resurrection evidence.

Claimed strand	What it can support	Dependence or rival pathway	Required Bayesian question
Early proclamation	An early conviction that Jesus had been vindicated or raised	Downstream from experiences, scriptural interpretation, and group formation	How much more likely is early proclamation after bodily resurrection than after compelling non-bodily experiences and interpretation?
Appearance traditions	Reports and memories of perceived encounters	Traditions may share transmitters, formulas, expectations, and later narrative development	Which reports are informationally distinct, and what reliability model connects experience to bodily event?
Empty-tomb narratives	A tradition of a vacated burial place	Burial uncertainty, literary relations, apologetic development, and selection among narratives remain live	How independently attested is the tomb claim, and how strongly does it distinguish resurrection from the weighted complement?
Paul's conversion	A distinct, powerful experience producing conviction and action	It directly supports perceived revelation more readily than observation of a corpse returning to life	What feature of the experience uniquely favors bodily resurrection over revelatory or visionary alternatives?
Movement growth and costly commitment	Sincerity, identity, resilience, and social transmission	These are consequences of belief and community dynamics, not fresh observations of the event	After conditioning on sincere belief, how much additional information about bodily resurrection remains?

The Synoptic Gospels are a clear warning against casual independence. Their literary relations are the subject of a large scholarly problem, not four sealed observational channels; Markan priority and other source-use proposals exist because substantial verbal and structural relations require explanation (Goodacre 2001). The exact solution to the Synoptic Problem need not be settled here. Any serious solution denies the naïve picture in which every repeated detail is automatically a new witness.

The same caution applies across genres. An early formula, a later narrative, a sermon, and movement growth may all trace partly to one cluster of experiences and interpretations. Conditional dependence does not always reduce evidential force by a constant discount. It can weaken, preserve, or occasionally strengthen a pattern depending on the network. The valid conclusion is narrower: one may not replace the joint likelihood with a product of marginal likelihoods unless the relevant conditional independence has been defended.

6 Sincerity, Reliability, and What Testimony Targets

Testimony has evidential force. A witness's sincerity, access, memory, interpretive framework, reporting incentives, and relation to other witnesses all matter. The mistake is to compress these dimensions into a binary choice between "liar" and "reliable reporter of bodily resurrection."

Suppose a source sincerely reports an appearance. That report may support several nested claims with different strength:

1. the source or community transmitted an appearance claim;
2. one or more persons believed they had an encounter;
3. the experience had a particular perceptual or visionary character;
4. the experience was caused by the bodily presence of the formerly dead Jesus; and
5. the cause was the purposeful action of the deity specified by Christian theism.

Evidence for an earlier step does not automatically carry unchanged to every later step. Sincerity bears strongly against deliberate fabrication, but less directly against misperception, altered memory, religious experience, social reinforcement, or mistaken causal interpretation. The final theological conclusion adds still more commitments about identity and intention.

Allison's wide-ranging historical study is valuable because it resists easy answers on both sides. It treats the ancient sources, apparition literature, visionary experiences, empty-tomb traditions, skeptical proposals, and apologetic overreach as parts of one difficult record (Allison 2021). Licona likewise insists on weighing hypotheses rather than dismissing miracle claims before investigation (Licona 2010). That shared discipline supports the present demand: identify the exact proposition each evidence item bears on, then model the bridge from that proposition to bodily resurrection.

The McGrews explicitly analyze multiple testimonial strands and independence (T. McGrew and L. McGrew 2009). A useful response to their project is therefore not "testimony never counts." It is to ask whether the reliability estimates, witness units, and conditional-independence assumptions are public premises or inherited from a favorable reading of the sources. If changing those assumptions within a defensible range dramatically changes the Bayes factor, the conclusion should report that sensitivity rather than conceal it.

7 Divine Intent Is a Likelihood Variable

The likelihood $P(E \mid H, B)$ depends on more than whether a powerful deity could raise Jesus. It depends on why that deity would do so and why the evidence would take its actual form. A capacity hypothesis is not yet a prediction.

Consider two disclosure policies. Under a *public-clarity policy*, the event is meant to give geographically broad, independently checkable evidence sufficient to identify Jesus across cultures and generations. Under a *limited-disclosure policy*, the deity permits local experiences, mediated texts, disputed narratives, and a long-lived need for trust and interpretation. The surviving record appears more expected under the second policy than under the first. But the second policy cannot borrow the first policy’s promise of clear public identification without further argument.

This creates a disclosure fork:

1. If bodily resurrection is proposed as a clear public signal, the model must compare the actual local, text-mediated, and dispute-generating record with clearer signals that the same agent could have supplied.
2. If ambiguity or limited disclosure is built into the hypothesis, the actual record may fit more easily, but its power to identify one specific divine purpose to outsiders decreases unless that policy is independently supported.

The fork is not a claim that a deity must follow human preferences. It is a rule against selecting intentions after seeing the evidence. “Clarity” cannot explain clear data while “hiddenness” explains unclear data unless the conditions governing the switch are specified independently. Otherwise divine agency becomes elastic enough to accommodate any evidential distribution.

Swinburne’s account openly proposes divine reasons and asks how they bear on incarnation and resurrection (Swinburne 2003). That is exactly where the dispute should occur. The public case must show why those reasons are more than coherent within Christian theology: they must be sufficiently grounded for a not-yet-Christian inquirer to use them when assigning $P(E \mid H, B)$.

The intention test

Do not ask only whether the evidence is possible if a deity acted. Ask which independently motivated divine purpose makes this evidential pattern more expected than clearer, wider, recurring, or ordinary alternatives. If the purpose is chosen after the pattern is known, fit has replaced prediction.

8 The Complement Is a Weighted Mixture

The negation of bodily resurrection is not one empty alternative. It includes many pathways: individual or group experiences, grief and enduring bonds, revelation claims, mistaken inference, uncertain burial information, literary development, social reinforcement, deliberate acts by some participants, unknown local events, and combinations among them. Allison’s comparisons with apparition and visionary traditions illustrate why the alternatives cannot be reduced to “the disciples lied” (Allison 2021).

If the alternatives $A_1, \dots, A_m$ are made mutually exclusive for modeling purposes, then:

$$P(E \mid \neg H, B) = \sum_{i=1}^m P(E \mid A_i, B)P(A_i \mid \neg H, B). \quad (4)$$

This equation imposes two disciplines. First, the alternatives need weights. Listing ten possibilities does not by itself make their mixture strong; each must receive probability within the complement. Second, defeating one rival does not empty the denominator. Unless the rival set is exhaustive and mutually exclusive, probability mass moves elsewhere in the complement rather than automatically into H .

Historical alternatives are frequently combinations rather than single-cause stories. A visionary experience, scriptural rereading, memory change, and institutional development can occur in one history. Requiring one natural alternative to reproduce every feature by itself can therefore bias the comparison. The resurrection hypothesis is allowed to combine divine action, appearances, human testimony, community formation, and literary transmission. Fair comparison allows ordinary pathways to combine as well.

This does not license a shapeless “anything happened” reserve. Alternatives must be historically admissible, internally coherent, and weighted rather than invoked only when convenient. But incompleteness should be represented as uncertainty, not assigned a probability of zero. Sober’s contrastive account of evidence is pertinent: a favored hypothesis does not win simply because one selected competitor fails; the relevant alternatives and their likelihoods must be compared (Sober 2008).

9 A Qualitative Sensitivity Audit

When public agreement on numerical values is unavailable, the proper response is not to abandon rigor. It is to state which variables are decisive, what evidence constrains them, and whether the conclusion survives plausible changes. Table 2 applies that discipline without inventing numbers.

Table 2: Variables a public resurrection model must constrain.

Variable	Public burden	Common vulnerability	Effect of uncertainty
Background prior	Define the relevant background without counting the disputed evidence twice	Generic theism is treated as the full prior for a specific resurrection	Posterior odds can vary by orders of magnitude before testimony is added
Divine selection and signaling	Give independent reasons for identifying Jesus and choosing bodily resurrection	Christian fittingness is used as evidence for the story that supplies it	The specific prior inherits unargued theological commitments
Disclosure policy	Explain why the actual evidential distribution is expected	Clarity and ambiguity are both absorbed after the fact	The numerator becomes flexible rather than discriminating
Witness reliability	Distinguish sincerity, experience, memory, transmission, and causal interpretation	Sincerity is treated as direct access to bodily event	Evidence for belief is promoted into evidence for its ultimate cause
Dependence structure	Identify shared sources, causes, formulas, and downstream effects	Repeated or causally linked items are multiplied as independent	The cumulative Bayes factor is overstated or at least unsupported
Alternative mixture	Specify serious, weighted, combinable pathways	One weak rival stands in for the whole complement	Refuting a caricature appears to confirm H automatically
Selection and stopping rules	State which evidence was sought, omitted, grouped, and counted	Favorable items define the ledger after the fact	The model cannot distinguish prediction from retrospective curation

The table’s conclusion is not that every row favors skepticism. It is that each row can materially change the posterior, and the public case does not gain a determinate result merely by leaving a row blank. “Unknown” is not a number favorable to either side. A responsible presentation should show at least qualitative sensitivity: which assumptions must be strong for the conclusion, which can weaken without changing it, and which cause the posterior ranking to reverse.

This is where a cumulative case can become less secure than its visual presentation. A row of six evidential items suggests six separate confirmations. A dependency graph may reveal one or two initiating clusters followed by several consequences. A list of natural explanations suggests fragmentation.

A mixture model may reveal that compatible processes jointly explain different parts of the record. The structure, not the count, determines the force.

10 Five Strong Replies

10.1 “Background theism can make the prior substantial”

Yes. If an inquirer already has strong independent reason for a God-concept disposed toward incarnation, Jesus, bodily resurrection, and mediated disclosure, $P(H | B)$ can be much higher than a critic assigns. The present argument does not impose one universal prior. It asks that the narrower conditionals in Equation 2 be defended rather than collapsed into generic theism. A high prior may be rational inside a larger worldview while failing to function as public evidence for someone who does not share that worldview.

10.2 “The early creed and appearance traditions are too early for legend”

Early evidence constrains the timeline and supports early conviction. It makes some slow-development stories less plausible. It does not by itself identify the cause of the conviction as bodily resurrection. Experiences, interpretations, and formulas can arise early; the likelihood comparison still asks which causes make that early pattern most expected. “Early” is evidentially relevant, not causally self-interpreting.

10.3 “No single natural explanation covers every fact”

The complement need not be one single-cause hypothesis. Historical events commonly have interacting psychological, social, literary, and material causes. A fair comparison penalizes ad hoc additions on both sides and avoids assembling a new auxiliary only after every objection. It does not require ordinary history to imitate the theological unity of H before it may enter the denominator.

10.4 “Bayesian probabilities are subjective”

Judgment is unavoidable, but it need not be hidden. Bayesian structure improves the debate when it exposes where judgments enter, prevents double counting, and shows sensitivity to alternatives. If reasonable assignments yield sharply different results, the honest conclusion is underdetermination, not whichever posterior the presenter prefers. Subjective probability does not make arbitrary probability respectable (Howson and Urbach 2006; Sprenger and Hartmann 2019).

10.5 “Personal agency is not governed by statistical laws”

Agency complicates prediction but does not abolish evidence. Intentions, character, goals, opportunities, and costs support expectations about human agents; a divine-agent model needs analogous content if it is to explain one evidential distribution better than another. An agent whose possible reasons expand to fit every observation remains logically possible, but observations discriminate among such models only when the attributed reasons constrain expectation.

These replies preserve live possibilities and, in some cases, real evidential contributions. None licenses the shortcut from compatible evidence to a uniquely supported bodily resurrection.

11 What a Public Bayesian Case Would Require

A stronger argument need not pretend to remove judgment. It should make judgment auditable. At minimum it would:

1. **Define the event claim.** Distinguish bodily restoration, transformed embodiment, appearances, exaltation, and the theological purpose attributed to the event.

2. **Fix the background.** Identify which evidence belongs in B and which belongs in E , preventing the same consideration from financing both prior and likelihood.
3. **Decompose the specific prior.** Defend the move from miracle-capable theism to this person, event, purpose, and disclosure policy.
4. **Identify informational units.** Separate observations from reports, reports from later narratives, and initiating evidence from downstream consequences.
5. **Model dependence.** Use joint conditional probabilities or a Bayesian network rather than multiplying marginal Bayes factors by default.
6. **Build the complement.** Include weighted and combinable historical pathways, not one convenient skeptical foil or an unstructured list.
7. **Test divine-intent sensitivity.** Show how the result changes under clearer, limited, or ambiguous disclosure policies and justify the policy used.
8. **Report robustness.** State which defensible changes preserve the posterior ranking and which reverse it; avoid a headline number when the model is assumption-dominated.

This protocol can improve both apologetic and skeptical reasoning. It blocks a critic from using an undefined “naturalism” as a probability sink, and it blocks a defender from using undefined divine purpose as a likelihood maximizer. It requires both sides to expose the assumptions that turn historical claims into posterior judgments.

The protocol also clarifies what success would look like. A resurrection case would be publicly strong if independently supported background considerations gave the specific hypothesis non-negligible prior odds, if the joint evidence were much more expected under that hypothesis than under a serious weighted complement, and if that advantage survived defensible models of source dependence and disclosure intent. The present conclusion is that common public presentations have not demonstrated all three, not that no future argument could.

12 Conclusion

The resurrection of Jesus is a specific historical and theological claim, not generic theism with testimony attached. Bayesian reasoning clarifies what the public argument must do: justify the narrower prior, compare joint likelihoods, model source and causal dependence, populate the complement, and make divine intention constrain the expected evidence. Each task can be attempted. None is discharged by saying that the record fits resurrection.

The strongest historical items can support early proclamation, sincere conviction, reported experiences, and the rapid formation of resurrection belief. They may favor bodily resurrection over particular rivals. But public posterior superiority requires more. When early formulas, reports, narratives, conversions, and movement effects share causal or literary roots, their repetition cannot be multiplied without a dependence model. When a broad God-concept is narrowed to one person, act, purpose, and evidence regime, the intervening conditionals require independent support. When the complement is a mixture, refuting one alternative does not erase the rest.

The rational conclusion is therefore direct and limited. Common Bayesian resurrection arguments do not establish the posterior advantage they advertise because their decisive priors, likelihoods, dependence relations, and divine-intent assumptions remain underconstrained. This does not prove that the event did not occur, deny that testimony matters, or forbid a believer from locating the claim within a wider theology. It asks public argument to stop borrowing confidence from variables it has not yet paid for.

Until those variables are independently constrained and the conclusion survives sensitivity analysis, compatibility and accumulation remain weaker than confirmation.

A Formal Reconstruction of the Central Thesis

A.1 Plain-language reconstruction

- P1.** A public Bayesian argument establishes posterior superiority for a specific resurrection hypothesis only if it supplies justified prior odds, the joint likelihood of the total evidence, a dependence-aware account of its sources and consequences, and a weighted comparison with serious alternatives.
- P2.** The common public case leaves its prior, divine-intent, dependence, and alternative-weight inputs too underconstrained to rule out defensible settings that substantially change the posterior ranking.
- P3.** When materially influential Bayesian inputs remain underconstrained, and defensible alternatives for those inputs substantially change the posterior ranking, the evidence presented does not establish that ranking.
- P4.** Therefore the common public case does not establish posterior superiority for the specific bodily-resurrection hypothesis.
- P5.** Failure to establish posterior superiority does not entail that bodily resurrection is impossible or did not occur.

The inference from P1–P3 to P4 is deductively valid once “establishes” means that the offered public premises warrant the claimed posterior ranking. P5 prevents a scope error: non-establishment is not disproof. P1 follows from Bayesian conditionalization and the probability calculus. P2 is an interpretive and historical diagnosis supported by the audits in the body and remains open to defeat by a model that supplies the missing constraints. P3 is an epistemic bridge: a conclusion is not established when its direction depends on materially unsettled assumptions.

A.2 Symbols

B : The relevant background information fixed before the evidence under review is added.

T : Miracle-capable theism.

J : The divine intention to identify Jesus uniquely.

R : Bodily resurrection chosen as the identifying act.

C : The divine choice of the historically mediated disclosure record under review.

H : The specific resurrection hypothesis $T \wedge J \wedge R \wedge C$.

E_k : One informationally identified evidence unit; $E = (E_1, \dots, E_n)$ is the total ordered evidence.

n : The number of informationally identified evidence units in the ordered total E .

A_i : One component of a mutually exclusive, collectively exhaustive partition of the modeled non-resurrection complement.

w_i : The conditional weight $P(A_i \mid \neg H, B)$ assigned to A_i , with $\sum_i w_i = 1$.

m : The number of mutually exclusive components in the modeled non-resurrection complement.

A.3 Bayesian reconstruction

How to read the notation. The vertical bar in $P(H \mid B)$ reads “given”: this expression is the probability of H when B is already assumed. The sign $\neg$ means “not,” so $\neg H$ is the non-resurrection complement. The sign $\wedge$ joins commitments into one conjunction. The summation sign $\sum$ adds across alternative components, whereas the product sign $\prod$ multiplies successive conditional factors. The index k tracks evidence units; the index i tracks alternatives. These symbols organize the comparison but do not supply numerical probabilities.

The prior for the specific hypothesis is:

$$P(H \mid B) = P(T \mid B)P(J \mid T, B)P(R \mid T, J, B)P(C \mid T, J, R, B). \quad (\text{A1})$$

Read Equation A1 from left to right. $P(T \mid B)$ is the probability of miracle-capable theism on the fixed background. $P(J \mid T, B)$ asks whether such a deity would identify Jesus uniquely. $P(R \mid T, J, B)$ asks whether bodily resurrection would be chosen as that identifying act. $P(C \mid T, J, R, B)$ asks whether the actual historically mediated disclosure policy would be chosen given the preceding commitments. Here C is part of the hypothesis, while E below is the evidence used to update it.

The equality is the probability chain rule applied to the conjunction $H = T \wedge J \wedge R \wedge C$; it does not assume that the four commitments are independent. The factors may be high or low. Its point is that H cannot simply inherit the full prior of the broader claim T : every narrowing conditional needs an independently stated reason.

For dependent evidence, the joint likelihood is given by the chain rule:

$$P(E \mid H, B) = P(E_1 \mid H, B) \prod_{k=2}^n P(E_k \mid E_1, \dots, E_{k-1}, H, B), \quad (\text{A2})$$

In Equation A2, the first factor evaluates the first evidence unit given H and B . Each later factor asks how expected the next unit is after all earlier units are already known. Conditioning on the earlier units prevents their shared information from being counted again as though it were fresh. The ordering is bookkeeping: a different order yields the same joint likelihood when every conditional probability is assessed consistently.

Only under the relevant conditional-independence assumptions may the earlier E terms be dropped from the later factors. Equation A2 therefore does not impose a discount by fiat; it marks exactly where literary, causal, or testimonial dependence must enter the model.

The likelihood of the complement is:

$$P(E \mid \neg H, B) = \sum_{i=1}^m w_i P(E \mid A_i, B), \quad w_i = P(A_i \mid \neg H, B), \quad \sum_{i=1}^m w_i = 1. \quad (\text{A3})$$

Equation A3 treats the A_i alternatives as a mutually exclusive and collectively exhaustive partition of $\neg H$. Each w_i is that alternative’s conditional share of the complement; because the weights are probabilities, they are nonnegative and sum to one. The right-hand side is therefore a weighted average of how expected E is under the modeled alternatives. A route that combines several ordinary processes must be represented as its own component rather than forced into a one-cause rival.

This equation makes every A_i and w_i part of the denominator instead of treating $\neg H$ as a void. Naming alternatives without assigning defensible weights does not yet define the comparison. Substituting Equations A1–A3 into posterior odds yields:

$$\frac{P(H \mid E, B)}{P(\neg H \mid E, B)} = \frac{P(H \mid B)}{P(\neg H \mid B)} \times \frac{P(E \mid H, B)}{\sum_{i=1}^m w_i P(E \mid A_i, B)}. \quad (\text{A4})$$

Equation A4 has three readable parts. The left side is the posterior odds after the evidence is included. The first ratio on the right is the prior odds before that evidence. The last ratio is the dependence-aware Bayes factor: the joint likelihood under H divided by the weighted likelihood under the complement. The evidence favors posterior superiority for H precisely when the full product on the right exceeds one; one means a posterior tie, and a value below one favors the complement.

The formal result is conditional. Equation A4 identifies the inputs that could establish posterior superiority; it does not assign them or assume that any one factor is small. If the prior odds, the dependent joint likelihood $P(E \mid H, B)$, or the weighted denominator remains materially unconstrained, the evidence list alone does not establish that the product exceeds one. Conversely, a future argument that independently constrains those inputs and remains robust across defensible alternatives would answer this paper's criticism. This is the symbolic counterpart of P1–P5: non-establishment is not disproof.

A.4 Worked reading without invented numbers

Suppose E_1 denotes early proclamation, E_2 an appearance-claim tradition, and E_3 a later narrative strand. These labels separate questions; they do not declare the units independent. Equation A2 first asks how expected E_1 is under H . It then asks how much additional expectation E_2 contributes once E_1 is already known, and how much E_3 contributes once both earlier units are known. If the later units inherit content from the earlier ones, that inheritance belongs inside the conditional probabilities instead of being counted as two new confirmations.

For Equation A3, an A_i may represent a carefully specified combination of experience, scriptural interpretation, transmission, and narrative development; another may combine uncertain burial information with later literary elaboration. To use the equation, the modeled components must be defined so that they do not overlap and together cover the complement. The w_i values then distribute probability within $\neg H$; they do not assert that any alternative actually occurred.

Equation A4 finally asks whether the prior odds multiplied by the dependence-aware likelihood comparison exceeds one. The example supplies no answer by stipulation. It shows what historical, theological, and source-critical judgments must be defended before a numerical answer can function as public evidence.

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