

One Liar; 553 Miracles

False Premises, Authority Bias, and the Manufacture of Healing Testimony

Phil Stilwell

Independent Scholar

ORCID: 0009-0009-3725-8682

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Central claim

A healing testimony cannot establish a divine cause until its starting diagnosis, later outcome, treatment history, comparison class, and selection process are audited. Sincerity can verify what a witness believes; it cannot replace the missing medical and causal evidence.

Preview: A compelling story is not yet a causal comparison

What is reported	What may be real	What remains open	What public evidence requires
A grave diagnosis, prayer, and later relief or improvement.	The witness's fear, gratitude, recovery experience, and honest conviction.	Disease, cure, causal route, treatment effect, natural course, error, and reporting selection.	Independent baseline and outcome records plus a comparison that includes ordinary alternatives and unreported cases.

This audit does not assume that miracles are impossible. It asks whether a particular testimony discriminates divine healing from diagnostic error, reclassification, treatment, natural course, measurement variation, and unknown ordinary causes.

Visual preview:

Credogenic Miracles: Auditing the Premise of Healing Testimony

THE ANATOMY OF A CREDOGENIC MIRACLE

FROM NARRATIVE TO VALIDATION



Read this as a failure map, not a timeline or a diagnosis of every healing witness. The left side shows how a mistaken or corrupted medical premise can enter through trusted authority; the center separates genuine relief from proof of biological cure; the right side shows where a community's interpretation must give way to independent records and comparison. The number 553 refers to patients who received medically unnecessary infusions or injections in the Fata scheme, not to 553 people proved never to have been ill. The diagram therefore illustrates a possible route to sincere but causally mistaken testimony; it does not count actual miracle claims or settle any particular case.

Abstract

Healing testimony can be emotionally credible while remaining causally inconclusive. A witness may truthfully report a frightening diagnosis, prayer, and later relief, yet the public inference to divine healing still depends on facts not contained in the story: whether the disease was present at the claimed severity, what objectively changed, what treatments and ordinary processes were active, and how the reported case was selected from all relevant outcomes.

The prosecution of oncologist Farid Fata supplies a severe premise-checking lesson. The public record states that his fraud included medically unnecessary infusions or injections administered to 553 patients, false diagnoses, and treatments for nonexistent maladies. It does not show that 553 healthy people were falsely diagnosed or that 553 later recoveries became miracle reports. The title is a counterfactual warning: if trusted diagnosis is accepted without independent audit, one corrupt authority can create the narrative conditions for many apparent cures.

This paper develops a disciplined comparison between a specified divine-healing hypothesis and an ordinary-cause family that includes diagnostic error, disease reclassification, treatment response, natural history, measurement variation, and unknown mundane routes. It distinguishes reported diagnosis from disease, reported improvement from verified outcome, sincerity from causal accuracy, and a selected testimony from a complete outcome record. It then proposes a practical evidence ledger for public healing claims.

The result is limited but firm. An unaudited testimony may justify gratitude, pastoral care, further investigation, or personal religious interpretation. By itself it does not establish that a divine intervention occurred. This is non-establishment rather than disproof: a well-documented case could still favor divine healing, but only by surviving the same premise, outcome, comparator, independence, and selection checks expected of other public causal claims.

Keywords: healing testimony; miracles; diagnostic error; authority bias; causal inference; selection effects; evidence; Farid Fata

1 The Missing Middle of a Miracle Story

The familiar healing testimony has three memorable beats: a person receives a grave diagnosis, prayer or another religious intervention occurs, and the person later improves. The emotional sequence is complete. The causal sequence is not. Between the first report and the final interpretation lie several questions: Was the initial condition independently established? What exactly changed? Which treatments were given? How variable is the condition? How often do comparable patients improve? Who did not improve, and why is this case the one being heard?

The central problem is not testimony as such. Testimony is indispensable in medicine, history, law, and ordinary life. A patient's account can accurately report symptoms, fear, conversations, and perceived improvement. A community's account can accurately report prayer, support, and gratitude. The error occurs when evidence for those facts is silently promoted into evidence for a further causal claim. "The witness sincerely believes that healing occurred" and "a divine intervention caused the medical outcome" are different propositions.

Miracle scholarship ranges from defenses that assemble large bodies of testimony to critiques of overly restrictive arguments against testimonial evidence (Keener 2011; Earman 2000). This paper does not settle the prior probability of miracles or reject reports because they concern religion. It accepts the modest point that testimony can carry evidence. Its question is comparative: how much does a healing story favor a specified divine cause over the strongest ordinary alternatives after the baseline, outcome, and reporting process are examined?

The missing-middle problem

A diagnosis report and a recovery report are endpoints in a story. Public causal evidence must also secure the medical state represented by each endpoint and compare the routes connecting them. Emotion can make the endpoints vivid; it cannot fill the evidential gap between them.

2 What the Fata Case Establishes

Farid Fata was a Michigan hematologist-oncologist whose criminal conduct exploited the trust built into specialist medicine. He pleaded guilty to thirteen counts of health-care fraud, one count involving kickbacks, and two counts of money laundering. In 2015 he received a 45-year prison sentence. The Department of Justice stated that the scheme included medically unnecessary infusions or injections to 553 individual patients and approximately \$34 million in fraudulent claims (U.S. Department of Justice, U.S. Attorney’s Office, Eastern District of Michigan 2015).

The Sixth Circuit’s opinion supplies the point most relevant here. It described a physician occupying a position of trust, able to make false diagnoses and give dangerous, unnecessary treatment to hundreds of patients who relied on his presumed integrity and professional judgment. It also referred to treatment of nonexistent maladies (United States Court of Appeals for the Sixth Circuit 2016). The case is therefore not a thought experiment about fallible medicine. It is a documented example of diagnostic and therapeutic premises being corrupted at the authoritative source.

Accuracy requires an immediate limit. The number 553 describes patients who received medically unnecessary infusions or injections; it is not a judicial finding that all 553 lacked disease. Some patients had cancer and were overtreated, some received inappropriate care, and the public sources do not turn every victim into a uniform false-diagnosis case. Nor is there evidence that 553 recoveries were proclaimed as miracles. The title’s arithmetic is deliberately counterfactual: if each trusted diagnosis supplied the premise of a later healing narrative, one liar could manufacture the appearance of many miracles without causing a single supernatural event.

The case establishes a failure mode, not its frequency in religious communities. Most clinicians are not fraudsters; most errors are not deliberate; and a religious witness is not blameworthy for relying on professional expertise. The lesson is structural. When one person’s report depends on another person’s specialized judgment, sincerity can travel intact through a false premise. The patient may report exactly what was said. The congregation may repeat the patient’s account faithfully. Every speaker may be honest while the starting medical proposition remains false.

3 Authority, Dependence, and Honest Error

Modern knowledge requires dependence on specialists. Patients usually cannot read pathology, calibrate imaging equipment, or reconstruct a differential diagnosis on their own. Such reliance is rational because knowledge is divided across people and institutions (Hardwig 1985). Calling this relation “authority bias” should not imply that trusting a clinician is itself irrational. The relevant bias appears when appropriate practical trust is converted into unconditional evidential certainty.

Three levels of support are easily collapsed:

1. **Source report:** a clinician said that the patient had condition D .
2. **Medical proposition:** the patient actually had D at the stated severity and time.
3. **Causal conclusion:** a later change was caused by a divine intervention.

Good testimony can strongly support the first level. Records, independent review, and appropriate tests are needed for the second. A comparative causal analysis is needed for the third. Repeating the first level with increasing confidence does not automatically secure the next two.

This distinction matters because diagnostic error is neither exotic nor limited to misconduct. The National Academies defines diagnostic error in patient-centered terms and emphasizes that inaccurate or delayed explanations can lead to unnecessary treatment, psychological harm, and other consequences (National Academies of Sciences, Engineering, and Medicine 2015). Recent burden estimates concern missed dangerous diseases rather than false miracle premises, so they cannot be inserted as a rate of false-positive healing stories. They do demonstrate that diagnostic accuracy is a serious empirical problem, not an assumption to be granted without evidence (Newman-Toker et al. 2024).

4 The Anatomy of a Credogenic Miracle

Call a report a *credogenic miracle* when belief-producing conditions generate the public appearance of miraculous healing before the relevant causal evidence has been secured. The term is stipulative. It does not label a real divine act, diagnose a witness, or imply fraud. It names an evidential pattern in which confidence is manufactured more quickly than verification.

The pattern has five separable stages:

1. **An authoritative baseline.** A serious diagnosis is communicated and treated as certain, even when its evidential basis is unavailable or later revisable.
2. **A salient intervention.** Prayer, anointing, pilgrimage, or another memorable religious act occurs within the illness narrative.
3. **A meaningful change.** Symptoms ease, a later test differs, treatment succeeds, a diagnosis is revised, or feared decline does not occur on schedule.
4. **A causal interpretation.** The change is classified as divine healing because the intervention is memorable and the outcome is desired.
5. **Selective transmission.** The successful story is repeated while unresolved cases, failures, relapses, and unclear baselines are less likely to circulate.

No stage requires dishonesty. Availability and representativeness can make a vivid sequence feel more diagnostic than a less memorable statistical comparison (Tversky and Kahneman 1974). Motivated reasoning can influence which explanations receive scrutiny without allowing people to believe whatever they want (Kunda 1990). Confirmation bias can affect the search for, interpretation of, and memory for evidence on many sides of a dispute (Nickerson 1998). These mechanisms are possibilities to control, not accusations to assign.

Relief deserves special care. If a person has lived under the threat of death and later learns that the situation is better than feared, the emotional release is real. It may be transformative. Yet relief tracks the contrast between what the person expected and what the person now believes. It does not by itself reveal whether a tumor disappeared, a test was mistaken, a label changed, treatment worked, or the prognosis had been misunderstood. Emotional authenticity and causal accuracy can therefore move independently.

5 Five Distinctions an Audit Must Preserve

5.1 Reported diagnosis versus disease

A report that “the doctor said cancer” is evidence about communication. It becomes strong evidence of cancer only when supported by appropriate records such as pathology, imaging, laboratory findings, diagnostic criteria, and specialist interpretation. Even then, evidence can be incomplete or revisable. The distinction does not demand certainty. It demands that confidence track the actual quality of the baseline.

5.2 Reported improvement versus verified outcome

“Better,” “healed,” “in remission,” “no evidence of disease,” and “the original diagnosis was wrong” are not interchangeable. Symptoms can improve without the underlying condition disappearing. A disease can be controlled rather than cured. A scan can change because of technique or interpretation. An outcome claim should identify what was measured, by whom, when, and against which earlier measure.

5.3 Sequence versus cause

Prayer before improvement establishes temporal order. It does not establish that prayer caused the improvement. Treatment, delayed treatment effects, natural fluctuation, regression toward a person’s typical state, revised classification, and measurement variation may occupy the same interval. A divine cause remains possible, but temporal adjacency alone does not select it.

5.4 Possible explanation versus discriminating evidence

Showing that divine healing could explain an outcome establishes compatibility. Public confirmation requires comparison: is the total record more expected if the specified divine-healing hypothesis is true than if the strongest ordinary pathway is true? A narrative that fits both explanations cannot choose between them merely by being retold with conviction.

5.5 Selected success versus the full outcome set

A testimony is normally selected after something striking occurred. That is reasonable for storytelling but hazardous for causal inference. Without the number and condition of people who received similar prayer, the listener cannot know whether the reported outcome is exceptional within the relevant group. The missing cases are not a rhetorical demand that every congregation run a clinical trial. They are part of what the success claim means when it is offered as public evidence.

6 An Evidence Ledger for Healing Claims

Clinical case reports are not randomized trials, yet even case-report guidance calls for patient information, clinical findings, a timeline, diagnostic assessment, interventions, follow-up, outcomes, and transparent discussion (Gagnier et al. 2013). A religious healing claim offered publicly should not receive weaker documentation merely because its proposed cause is sacred. Table 1 turns that principle into a practical audit.

Table 1: Evidence ledger for a public healing claim.

Audit question	Useful evidence	Failure it constrains	Result if missing
Was the baseline disease present?	Contemporaneous reports, pathology, images, laboratory values, criteria, and independent specialist review.	False positive, miscoding, ambiguity, exaggeration, or fraud.	The story establishes a diagnosis report, not the disease premise.
What objectively changed?	Same-measure before/after evidence, dates, blinded or independent interpretation, duration, and relapse status.	Symptom-only inference, reclassification, measurement variation, or temporary change.	The story establishes perceived improvement, not cure.
What else occurred?	Medication, surgery, radiation, lifestyle changes, concurrent care, and expected timing of treatment effects.	Attributing a treated outcome exclusively to prayer.	The religious intervention is not causally isolated.
What is the ordinary course?	Prognosis for comparable cases, remission and fluctuation rates, and recognized diagnostic uncertainty.	Treating an uncommon but expected outcome as impossible.	Surprise remains personal rather than calibrated.
How was the case selected?	Number prayed for, predeclared outcomes, failures, partial responses, relapses, and lost follow-up.	Counting hits while invisible misses absorb the denominator.	The frequency and evidential weight are unknown.
Are sources independent?	Original records, separate witnesses, disclosed relationships, and direct clinician review.	Retelling one source as several confirmations.	Repetition adds reach, not independent support.

The ledger is intentionally symmetrical. A skeptic should not dismiss a case without reviewing strong documentation, and a defender should not promote a case without supplying it. Independent review does not mean finding a hostile evaluator. It means that the person checking the evidence is not merely repeating the claimant’s interpretation and has access to the relevant records.

7 Why the Denominator Changes the Story

Suppose a community prays for one hundred seriously ill people and later publicizes two unexpected improvements. The numerator is two: the memorable successes. The denominator includes all one hundred eligible cases, including deaths, nonresponses, partial changes, relapses, uncertain diagnoses, and people lost to follow-up. Without that denominator, “two healings occurred” cannot tell us whether the observed pattern differs from what ordinary care and natural history would produce.

This does not imply that every miracle claim must be supported by a randomized trial. An extraordinarily well-documented individual outcome might be evidentially important. It does imply that a collection of selected stories cannot be treated as a success rate. Adding more selected cases may add detail while preserving the same selection problem.

Controlled studies answer a different question from case narratives. The large STEP trial, for example, examined intercessory prayer under a defined randomized protocol in coronary bypass patients and did not find improved complication-free recovery from receiving prayer (Benson et al. 2006). That result does not prove that no divine healing ever occurs, and it should not be stretched beyond its design. It shows why defined groups, specified outcomes, and complete accounting can produce a different evidential object from memorable testimony.

The denominator also includes pathways. If the alternatives are limited to “the reported disease vanished naturally” versus “a deity healed it,” misdiagnosis, treatment effects, disease reclassification,

measurement error, and mixed causes disappear before comparison begins. A fair audit compares the divine hypothesis with the strongest ordinary family, not with one weak rival chosen for easy defeat.

8 Pastoral Meaning and Public Evidence

A testimony can have pastoral meaning even when its public causal status is unresolved. A community may celebrate survival, accompany a patient, express gratitude, or interpret an experience within a theological tradition. Those practices need not wait for philosophical certainty. The problem begins when a story is presented to outsiders as proof and then insulated from the standards that make causal claims trustworthy.

This distinction protects patients as much as audiences. Premature miracle language can create pressure to stop treatment, hide recurrence, reinterpret continuing symptoms as spiritual failure, or blame people who were not healed. It can also turn a patient into evidence for an institution before the patient has stable medical answers. The ethical priority is the person's care, consent, privacy, and truthful understanding of the condition.

Religious institutions have sometimes recognized the need for medical scrutiny rather than treating it as hostility. Historical work on canonization records shows physicians functioning as evaluators of healing claims inside a religious process (Duffin 2009). The existence of such scrutiny does not validate every conclusion, but it defeats the idea that documentation is inherently anti-religious. Verification is a way of respecting what a public miracle claim asks others to believe.

A disciplined pastoral sentence

"We are grateful for this improvement and regard it religiously" says more than the evidence can disprove. "This case publicly establishes a divine cause" says more than gratitude can prove. Keeping those sentences distinct permits hope without sacrificing truthfulness.

9 Four Objections

9.1 "Testimony is evidence, so the audit is excessive"

Testimony is evidence; the issue is what it is evidence for. A witness normally has direct access to fear, prayer, conversations, symptoms, and experienced change. The witness may have only mediated access to pathology and no direct access to the cause of recovery. The audit assigns testimony substantial weight within its proper range. It refuses only the unearned jump from sincere report to exclusive cause.

9.2 "The outcome was too unlikely to be natural"

Rarity can matter, but the relevant probability must be conditional on the verified disease, severity, treatment, patient characteristics, follow-up interval, and selection process. "Doctors were surprised" is not a numerical estimate, and "no current explanation" is not equivalent to "no ordinary explanation is possible." A severe test is informative because it would probably have exposed error if the claim were false (Mayo 1996). Surprise without a well-specified test is weaker.

9.3 "Bias cuts both ways"

Correct. Skeptics can discount religious evidence too quickly, search only for ordinary explanations, or apply documentation demands inconsistently. That symmetry supports the ledger rather than defeating it. The same records, source-independence checks, causal alternatives, and scope limits should govern both sides. A method is fair when the required evidence does not change with the preferred conclusion.

9.4 “A divine cause could work through treatment or natural processes”

It could, but the claim then changes. If a divine agent works through ordinary treatment, the medical outcome alone may not discriminate guided providence from unguided treatment response. The theological interpretation may rest on timing, purpose, personal experience, or a broader worldview. Those may matter to the believer, but they are not identical to public medical evidence for a medically discontinuous intervention. Precision about the hypothesis prevents apparent agreement from hiding different claims.

10 A Proportionate Public Standard

The proper standard need not be impossible certainty. It should be proportionate to the claim. “I felt supported during illness” needs personal testimony. “My symptoms improved after prayer” needs a clear timeline. “A disease disappeared unexpectedly” needs verified before-and-after medical evidence. “A divine agent caused the disappearance” additionally needs a comparison showing why the total record favors that cause over serious alternatives.

A responsible public report should therefore disclose:

- the exact diagnosis and the evidence supporting it;
- the exact outcome and how long it persisted;
- all relevant treatment and timing;
- the known uncertainty and ordinary course of the condition;
- the independence and qualifications of reviewers;
- the population from which the case was selected; and
- the conclusion the evidence supports, separated from conclusions it merely permits.

These requirements do not drain testimony of human meaning. They prevent the most moving part of a story from carrying evidential weight that belongs to missing records. They also create a route for a genuinely unusual case to become stronger. A claim that survives hostile alternatives, transparent documentation, and complete reporting deserves more attention than one protected by vagueness.

11 Conclusion

One liar need not invent hundreds of testimonies personally. If trusted authority supplies false medical premises, honest patients and communities can transmit the consequences with sincerity and emotional force. The Fata case demonstrates that the structural possibility is real while also imposing an accuracy limit: 553 counts recipients of medically unnecessary infusions or injections, not 553 proved false diagnoses or miracle reports.

The larger lesson applies beyond fraud. Diagnostic error, reclassification, treatment, natural history, measurement variation, and selective reporting can all widen the gap between a compelling narrative and a justified causal conclusion. Sincerity tells us something important about the witness. Relief tells us something important about the experience. Neither, without the missing middle, identifies what caused the medical outcome.

The remedy is neither cynicism nor silence. It is a proportionate audit: verify the baseline, define the outcome, reconstruct the treatment timeline, compare serious alternatives, preserve source independence, and count the cases that did not become testimonies. A healing claim that survives those checks is stronger because of them. A claim that has not survived them may remain meaningful, but it has not yet become public evidence for divine causation.

A Formal Reconstruction of the Central Thesis

A.1 Plain-language reconstruction

- P1.** If an individual healing testimony establishes a specified divine-healing cause over serious ordinary alternatives, then the testimony must rest on a verified medical baseline and outcome, include the relevant treatment and selection information, and make the total evidence more expected under the divine-healing hypothesis than under the strongest ordinary-cause family.
- P2.** An unaudited testimony lacks at least one of those required conditions: its baseline or outcome is unverified, relevant treatment or selection information is missing, or the needed comparative advantage has not been shown.
- P3.** Therefore an unaudited testimony does not establish the specified divine-healing cause over the serious ordinary alternatives.
- P4.** Failure to establish that cause does not entail that the healing did not occur, that the witness is dishonest, or that the testimony has no personal or pastoral value.

The inference from P1 and P2 to P3 is a valid form of *modus tollens*. In everyday language: if establishment requires a complete set of conditions, and the set is not complete, establishment has not been achieved. P4 blocks three invalid reversals. “Not established” does not mean “false”; “causally inconclusive” does not mean “insincere”; and “not public proof” does not mean “meaningless.”

Validity and factual support must be distinguished. The reasoning form is valid because the conclusion follows if P1 and P2 are true. Whether P2 is true in a particular case is an empirical question answered by records. Whether the comparison in P1 is an appropriate standard is an epistemological question defended in the body. A valid argument can still have a false premise, which is exactly why premise-auditing matters.

A.2 Symbols

C: The testimony establishes the specified divine-healing cause as a public conclusion.

V: The baseline disease and later medical outcome are independently verified.

A: Relevant alternative causes—including treatment and ordinary disease processes—have been fairly audited.

S: The selection process is known well enough to place the reported success among relevant successes, failures, relapses, and missing cases.

L: The total evidence has a likelihood ratio greater than one for the divine-healing hypothesis over the strongest ordinary-cause family.

B: Background information fixed before the evidence under review is added.

H: The specified divine-healing hypothesis.

N: The modeled ordinary-cause family.

E: The total case evidence, not merely the memorable testimony.

Q: A grave diagnosis was reported.

D: The disease was actually present as described.

R: Improvement was reported.

O: The claimed medical outcome actually occurred.

Z : The case-selection indicator; $Z = 1$ means that the case was selected for public testimony.

N_i : One mutually exclusive pathway within the ordinary-cause family.

w_i : The conditional weight assigned to pathway N_i within N .

m : The number of mutually exclusive pathways included in the modeled ordinary-cause family.

Every symbol above is used below. The letters are abbreviations, not measurements. No symbol becomes true merely because it appears in an equation.

A.3 The valid core

The plain-language inference can be written compactly as:

$$C \rightarrow (V \wedge A \wedge S \wedge L), \quad \neg(V \wedge A \wedge S \wedge L), \quad \therefore \neg C. \quad (1)$$

The arrow $\rightarrow$ reads “if, then.” The symbol $\wedge$ reads “and,” so all four requirements belong to one set. The symbol $\neg$ reads “not.” Equation 1 therefore says: if the testimony establishes the public causal conclusion, the verification, alternatives, selection, and comparative-evidence requirements are all met; at least one is not met; therefore establishment has not occurred.

This form does not say that all four conditions are equally difficult, or that they guarantee the truth of H . They are necessary conditions in this argument, not a mechanical certificate of a miracle. Strong documentation may satisfy V while the comparative question L remains open. A complete denominator may satisfy S while the outcome itself remains medically ambiguous.

A.4 Reports are not identical to medical states

Using the symbols listed above, the relation between reports and medical states can be written as:

$$Q \neq D, \quad R \neq O. \quad (2)$$

The sign $\neq$ means “is not identical to.” Equation 2 does not say that reports are usually false. It says that a report and the state it reports are different things. A pathology record can make Q strong evidence for D ; a matched follow-up scan can make R strong evidence for O . Without that bridge, replacing Q with D or R with O simply assumes the premise that needs checking.

This is the formal location of the Fata warning. Patients could accurately report that a trusted oncologist diagnosed and treated them. Their honesty did not make every diagnosis or treatment medically warranted. The information path preserved sincerity while failing to guarantee the proposition transmitted.

A.5 The comparative question

The likelihood ratio represented by L is:

$$\text{LR}_E = \frac{\Pr(E \mid H, B)}{\Pr(E \mid N, B)}. \quad (3)$$

The expression $\Pr(E \mid H, B)$ reads “the probability of the total evidence E , given the divine-healing hypothesis H and background B .” The vertical bar means “given,” not “caused by.” The denominator asks the parallel question under the ordinary-cause family N . The ratio compares predictions in the same direction. It does *not* reverse the conditionals and ask for $\Pr(H \mid E, B)$.

There are three direct readings of Equation 3. If $\text{LR}_E > 1$, the evidence is more expected under H than under N and therefore favors H over N . If $\text{LR}_E = 1$, the evidence is equally expected under both and does not discriminate. If $\text{LR}_E < 1$, the evidence favors N over H . “Favors” is not the same as “proves”: prior odds and the size of the ratio still matter.

The ordinary family is not one cartoon rival. If it contains m mutually exclusive pathways, its likelihood is a weighted average:

$$\Pr(E \mid N, B) = \sum_{i=1}^m w_i \Pr(E \mid N_i, B), \quad w_i = \Pr(N_i \mid N, B), \quad \sum_{i=1}^m w_i = 1. \quad (4)$$

The summation sign $\sum$ means “add the following terms.” Each N_i is one nonoverlapping route, such as an initial false-positive diagnosis; genuine disease followed by treatment response; genuine disease with fluctuating symptoms; or a mixed pathway defined so it does not overlap the others. The weight w_i is that route’s share within N , and all weights add to one. Equation 4 prevents an argument from defeating one weak natural explanation and treating the whole denominator as defeated.

A.6 From likelihood to posterior odds

Bayes’ theorem connects prior odds, evidence, and posterior odds:

$$\frac{\Pr(H \mid E, B)}{\Pr(N \mid E, B)} = \frac{\Pr(H \mid B)}{\Pr(N \mid B)} \times \frac{\Pr(E \mid H, B)}{\Pr(E \mid N, B)}. \quad (5)$$

Read Equation 5 as “starting odds times evidential force equals ending odds.” The first ratio on the right records the comparison before this case is added. The second ratio is the likelihood ratio from Equation 3. The left side is the comparison after the evidence is added. The equation does not assign values and does not declare either hypothesis true. It identifies what a public argument must defend.

This explains why “the story fits divine healing” is incomplete. Compatibility tells us that $\Pr(E \mid H, B)$ is not negligible. It does not tell us whether the numerator exceeds the denominator. If a false diagnosis followed by correction, or a treated disease followed by remission, also predicts a frightening first report and grateful later testimony, the same story may fit both sides.

A.7 Where the denominator enters

A success-only record often gives the audience evidence conditional on the selection indicator $Z = 1$:

$$\Pr(E \mid H, B, Z = 1) \quad \text{and} \quad \Pr(E \mid N, B, Z = 1). \quad (6)$$

Conditioning on $Z = 1$ means that the case is already known to have been chosen for telling. If striking improvements are more likely to be selected than failures, the reported set will look impressive under both H and N . That is why S in Equation 1 matters: the public comparison needs information about who entered the story and who did not.

A simple application uses no invented numbers:

1. Verify whether Q is adequately connected to D and whether R is adequately connected to O .
2. Build E from the full timeline, treatments, records, source relations, and follow-up rather than from Q and R alone.
3. Define H precisely and construct N from serious, nonoverlapping ordinary pathways using Equation 4.
4. Ask whether Equation 3 is defensibly above one and then place that result into Equation 5; if selection is outcome-driven, audit Z before interpreting the ratio.

The formal result matches the paper’s verbal conclusion. An unaudited testimony does not establish a divine-healing cause because it has not yet secured every necessary bridge from report to medical state and from sequence to comparative cause. Better records can change that assessment. The framework leaves that route open while refusing to fill missing premises with sincerity alone.

Bibliography

- Benson, Herbert, Jeffery A. Dusek, Jane B. Sherwood, Peter Lam, Charles F. Bethea, William Carpenter, Sidney Levitsky, Peter C. Hill, Donald W. Clem, Manoj K. Jain, David Drumel, Stephen L. Kopecky, Paul S. Mueller, Dean Marek, Sue Rollins, and Patricia L. Hibberd (2006). “Study of the Therapeutic Effects of Intercessory Prayer (STEP) in Cardiac Bypass Patients: A Multicenter Randomized Trial of Uncertainty and Certainty of Receiving Intercessory Prayer.” In: *American Heart Journal* 151.4, pp. 934–942. DOI: [10.1016/j.ahj.2005.05.028](https://doi.org/10.1016/j.ahj.2005.05.028).
- Duffin, Jacalyn (2009). *Medical Miracles: Doctors, Saints, and Healing in the Modern World*. New York: Oxford University Press.
- Earman, John (2000). *Hume’s Abject Failure: The Argument against Miracles*. Oxford: Oxford University Press.
- Gagnier, Joel J., Gunver Kienle, Douglas G. Altman, David Moher, Harold Sox, David Riley, and the CARE Group (2013). “The CARE Guidelines: Consensus-Based Clinical Case Report Guideline Development.” In: *Journal of Dietary Supplements* 10.4, pp. 381–390. DOI: [10.3109/19390211.2013.830679](https://doi.org/10.3109/19390211.2013.830679).
- Hardwig, John (1985). “Epistemic Dependence.” In: *The Journal of Philosophy* 82.7, pp. 335–349. DOI: [10.2307/2026523](https://doi.org/10.2307/2026523).
- Keener, Craig S. (2011). *Miracles: The Credibility of the New Testament Accounts*. Grand Rapids, MI: Baker Academic.
- Kunda, Ziva (1990). “The Case for Motivated Reasoning.” In: *Psychological Bulletin* 108.3, pp. 480–498. DOI: [10.1037/0033-2909.108.3.480](https://doi.org/10.1037/0033-2909.108.3.480).
- Mayo, Deborah G. (1996). *Error and the Growth of Experimental Knowledge*. Chicago: University of Chicago Press.
- National Academies of Sciences, Engineering, and Medicine (2015). *Improving Diagnosis in Health Care*. Washington, DC: National Academies Press. DOI: [10.17226/21794](https://doi.org/10.17226/21794).
- Newman-Toker, David E., Najlla Nassery, Adam C. Schaffer, Chihwen Winnie Yu-Moe, Gwendolyn D. Clemens, Zheyu Wang, Yuxin Zhu, Ali S. Saber Tehrani, Mehdi Fanai, Ahmed Hassoon, and Dana Siegal (2024). “Burden of Serious Harms from Diagnostic Error in the USA.” In: *BMJ Quality & Safety* 33.2, pp. 109–120. DOI: [10.1136/bmjqs-2021-014130](https://doi.org/10.1136/bmjqs-2021-014130).
- Nickerson, Raymond S. (1998). “Confirmation Bias: A Ubiquitous Phenomenon in Many Guises.” In: *Review of General Psychology* 2.2, pp. 175–220. DOI: [10.1037/1089-2680.2.2.175](https://doi.org/10.1037/1089-2680.2.2.175).
- Tversky, Amos and Daniel Kahneman (1974). “Judgment under Uncertainty: Heuristics and Biases.” In: *Science* 185.4157, pp. 1124–1131. DOI: [10.1126/science.185.4157.1124](https://doi.org/10.1126/science.185.4157.1124).
- U.S. Department of Justice, U.S. Attorney’s Office, Eastern District of Michigan (July 10, 2015). *Detroit Area Doctor Sentenced to 45 Years in Prison for Providing Medically Unnecessary Chemotherapy to Patients*. URL: <https://www.justice.gov/usao-edmi/pr/detroit-area-doctor-sentenced-45-years-prison-providing-medically-unnecessary> (visited on 08/21/2026).
- United States Court of Appeals for the Sixth Circuit (Sept. 2, 2016). *United States v. Fata, No. 15-1935*. Unpublished opinion. URL: <https://www.opn.ca6.uscourts.gov/opinions.pdf/16a0283n-06.pdf> (visited on 08/21/2026).