

Order Without Scripture

Human Regularity-Detection, Scientific Practice, and the Failure of Biblical Proprietorship

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Central claim

Biblical teaching is neither necessary for humans to detect regularities nor sufficient to produce scientific inquiry. If scripture owned the expectation of order, pattern learning and systematic prediction should be absent without it; instead, infants, nonhuman animals, craftspeople, and non-biblical civilizations detect and exploit stable relations. Christian beliefs and institutions contributed to some scientific histories, but contribution does not establish cognitive necessity, institutional monopoly, or a uniquely verified metaphysical explanation.

Preview:

Proprietorship claim	What it predicts	Counterevidence	Defensible conclusion
Scripture made confidence in an ordered world—and thus science—possible.	Without biblical teaching, agents should not reliably learn patterns or sustain systematic inquiry.	Learning precedes doctrine; Babylonian, Chinese, Greek, and Islamic practices used observation, mathematics, and correction.	Christianity may be one contributor to some scientific settings, but it does not own regularity, induction, or science.

The argument rejects necessity and monopoly, not every Christian contribution and not every theistic explanation of why regularity exists.

Visual preview:



Recurring natural cycles become usable knowledge through observation, comparison, instruments, and correction. The scripture volume at the edge represents one historical interpreter of order, not the source of the patterns or the sole route from experience to science. The image is conceptual rather than a chronology of every scientific tradition.

Abstract

Some Christian apologetic narratives claim more than that Christian thinkers helped shape early modern science. They claim that biblical teaching supplied the expectation of an orderly universe without which scientific inquiry could not arise. This paper separates three propositions often compressed into that story: a *cognitive claim* about the ability to detect regularities, a *historical claim* about the institutions of modern science, and a *metaphysical claim* about why regularity exists. The first is contradicted by evidence of predictive learning in nonhuman animals and prelinguistic infants. The second is contradicted when stated as exclusivity: Babylonian astronomy, ancient Chinese mathematical observation, Greek natural philosophy, Islamic astronomy, and cumulative craft traditions all supplied systematic practices outside biblical dependence. The third remains a distinct philosophical proposal; even if a Christian God-concept—a specified conception of a deity—explained natural order, that would not show that scripture caused human pattern recognition or was necessary for scientific practice.

The positive historical conclusion is plural. Christian doctrines, biblical interpretation, universities, and communities contributed to particular episodes in European natural philosophy, just as translation networks, mathematical inheritances, instruments, state patronage, skilled labor, criticism, and non-Christian traditions did. Science also requires more than confidence that nature is ordered: it requires locally testable expectations, measurement, public error-correction, and institutions capable of retaining failures as well as successes. The proprietorship claim therefore fails by moving from participation to necessity and from possible metaphysical explanation to historical ownership. The bounded conclusion neither denies Christian influence nor settles the ultimate metaphysics of regularity; it denies that those concessions make scripture the owner of induction or science.

Keywords: regularity; induction; science; Christianity; scripture; history of science; statistical learning; apologetics

1. Three Claims That Must Not Be Blended

A familiar apologetic story begins with a reasonable observation and ends with an exclusive conclusion. The reasonable observation is that some Christian investigators described nature as the intelligible creation of a rational deity and that biblical interpretation influenced how they read the natural world. The exclusive conclusion is that, without the Bible, human beings would lack the expectation of regularity required for science. The first proposition concerns contribution. The second asserts necessity. They are not interchangeable.

The paper's governing thesis is direct: biblical teaching is not necessary for detecting order, and belief in an ordered creation is not sufficient for scientific inquiry. The evidence is not that every culture developed the same institutions or that religious commitments never mattered. It is that pattern learning occurs before doctrinal instruction, practical inquiry occurs outside biblical cultures, and modern science depends on a package of practices that no bare confidence in order supplies.

At first substantive use, a *God-concept* means a specified conception of a deity, with particular intentions, powers, and relations to nature. A Christian God-concept can be proposed as an ultimate explanation of regularity. That proposal belongs to metaphysics. It cannot by itself establish the psychological origin of expectation or the historical origin of scientific institutions. To infer either origin from the metaphysical proposal is to change questions mid-argument.

Table 1: The three claims and the evidence each would require.

Claim	Exclusive form	Relevant evidence	Result defended here
Cognitive	Humans need biblical teaching to expect stable relations.	Infant and animal learning; ordinary action; cross-cultural prediction.	False: regularity-detection operates without possession of biblical doctrine.
Historical	Biblical Christianity was necessary for systematic science.	Comparative histories of observation, mathematics, craft, institutions, and transmission.	False as monopoly; Christian contributions remain historically real and local.
Metaphysical	A Christian God-concept uniquely explains why natural regularities obtain.	Comparative arguments about explanation, necessity, laws, chance, and rival metaphysics.	Not decided here; even success would not entail the first two claims.

This separation prevents two symmetrical mistakes. A critic need not deny every Christian contribution in order to reject biblical proprietorship. An apologist cannot establish proprietorship merely by documenting a contribution. The historical record can be mixed and still be decisive against exclusivity.

2. Regularity-Detection Comes Before Doctrine

To act is to anticipate. An animal approaches one cue and avoids another because past relations guide present behavior. An infant groups a stream of sounds because some syllables reliably follow others. A child releases a cup and expects it to fall. None needs a verbal theory that the universe is orderly. The relevant capacity is more basic: sensitivity to differences in what predicts what.

Rescorla's influential account of Pavlovian conditioning emphasizes that conditioning is not mere temporal pairing. Animals learn relations among events, including whether one event provides information about another; an expected outcome's omission can change later behavior (Rescorla, 1988). This is not modern science, but it is unmistakably regularity-sensitive prediction. A theology that arrived later cannot be a necessary psychological condition of the learning already occurring.

The same point appears in infancy. Saffran, Aslin, and Newport exposed eight-month-old infants to a continuous artificial speech stream in which transitional probabilities marked possible word boundaries. After only two minutes, infants distinguished more familiar statistical groupings from less familiar ones (Saffran et al., 1996). The result does not show that infants understand laws of nature. It shows something sufficient for the present argument: human cognition can extract stable relations without scriptural premises, explicit philosophy, or even a mature language in which to state them.

Ordinary skilled action expands that capacity. A potter varies clay, water, heat, and time; a farmer compares seed, soil, rain, and yield; a navigator connects celestial position with location; a healer remembers which interventions precede improvement. These practices can mix reliable inference with superstition, inherited error, and ritual. So can later science. What makes them evidentially relevant is not purity but feedback: some expectations survive repeated contact with the world and others do not. Cumulative culture retains techniques that no one individual could independently derive (Henrich, 2015).

The cognitive counterexample

If possession of biblical doctrine were necessary for regularity-detection, agents lacking that doctrine would not reliably learn predictive relations. Yet nonhuman animals, prelinguistic infants, and non-biblical communities do so. Biblical teaching may interpret this capacity; it is not its necessary source.

An apologist may reply that these organisms and communities can detect regularity only because the Christian deity created an orderly world and equipped minds to learn it. That is a metaphysical claim about the cause of the capacity, not evidence that agents need scripture to exercise it. A person can use vision without knowing an ultimate account of vision. Likewise, an animal can learn a predictive relation without possessing an explanation of why learning is possible.

3. Order Before and Outside Biblical Dependence

The historical record supplies more demanding counterexamples. Long before early modern European science, communities recorded recurring phenomena, calculated future events, and refined mathematical techniques. Calling every such practice “science” would flatten important differences. Calling none of it systematic inquiry would be equally distorting.

Babylonian astronomy is especially clear. Cuneiform evidence shows sustained numerical prediction of celestial phenomena, supported by scribal institutions and long observational records. Ossendrijver’s analysis of tablets dated roughly between 350 and 50 BCE shows Babylonian astronomers calculating Jupiter’s displacement from the area of a time–velocity graph—a sophisticated procedure previously associated with much later European mathematics (Ossendrijver, 2016). Whatever religious and divinatory meanings accompanied the practice, the computation relied on regular celestial relations and mathematical control without biblical dependence.

Ancient Chinese astronomy provides another independent case. The *Zhou bi suan jing*, assembled around the first century BCE from older materials, connects observations made with a gnomon—a vertical pole whose shadow can be measured—to mathematical cosmography and calendrical work. Cullen’s study shows developing mathematical and observational practices embedded in imperial, political, and cosmological settings (Cullen, 1996). The cosmography was not modern, and some conclusions were wrong. But wrong models can still embody disciplined measurement. Error does not erase the capacity to identify and project regularities; it shows why correction matters.

Greek, Islamic, Jewish, and Latin traditions were not isolated civilizations taking turns. They translated, preserved, criticized, and transformed one another. Saliba documents original mathematical astronomy in Islamic societies and its connections to later European developments, including debates about possible routes of transmission to Copernicus (Saliba, 2007). Grant emphasizes the Greek and Greco-Islamic inheritance of medieval Latin natural philosophy and the institutional importance of the university (Grant, 1996). These histories are incompatible with a single sacred root. They describe networks.

Table 2: Concrete counterexamples to a biblical monopoly on regularity-based inquiry.

Case	Regularity exploited	Practice	What the case establishes
Babylonian astronomy	Recurring planetary positions and velocities	Long records, arithmetic schemes, geometric calculation	Systematic celestial prediction did not await Christian scripture.
Ancient Chinese astronomy	Solar shadows, seasonal cycles, and celestial relations	Gnomon observation, calculation, calendars, state-supported specialists	Mathematical observation developed in a non-biblical conceptual setting.
Islamic astronomy	Planetary motions and inherited mathematical problems	Translation, criticism, new models and tools, institutional support	Scientific resources reaching Europe had plural cultural and religious histories.
Cumulative craft	Repeatable relations among material, technique, and result	Comparison, intervention, apprenticeship, preservation of successful procedures	Experiment-like learning is not confined to elite theology or formal natural philosophy.

These cases need not prove that a full modern scientific culture would have arisen in every setting. Necessity is defeated by a counterexample at the level asserted. If the claim is that humans could not expect order without scripture, animal learning and infant learning suffice. If the claim is that no systematic observation or mathematical prediction could occur without it, the ancient cases suffice. If the claim retreats to the particular configuration called modern science, it becomes a narrower historical thesis requiring comparative causal analysis, not a universal apologetic entitlement.

4. Modern Science Requires More Than Confidence in Order

Generic confidence in order is widespread; modern scientific institutions are not. The gap matters. A community may expect seasons, omens, essences, providential signs, or astrological influences to recur. Some expectations will be useful and others false. Merely believing that reality has a pattern does not specify which patterns are stable, at what scale, under what boundary conditions, or how rival accounts should be compared.

Scientific practice adds constraints. It operationalizes a question so that observations can count for and against an answer. It measures rather than merely notices. It uses instruments that extend perception while creating new sources of error. It records procedures, exposes claims to trained criticism, repeats tests, distinguishes calibration failure from theoretical failure, and sometimes reorganizes institutions around public correction. There is no single timeless “scientific method”; reliability emerges from interacting methods and communities (Oreskes, 2019; Shapin, 1996).

This point explains why “an orderly creator” is not a sufficient recipe. Two investigators can share a theology and expect different regularities. A biblical text does not by itself tell them the boiling point of water at a particular pressure, whether a drug’s apparent benefit survives a controlled comparison, whether an orbit is elliptical, or whether an instrument is miscalibrated. Those questions are resolved by local models and tests. Theology may motivate inquiry or supply a broad picture of intelligibility. It does not substitute for the work that makes a prediction precise and corrigible.

The claim that mathematics fits nature poses a genuine philosophical puzzle. Wigner famously emphasized the surprising effectiveness of mathematical structures in physical theory (Wigner, 1960). But surprise is not ownership. Wonder at mathematical fit does not establish that one scripture was necessary for recognizing it, and it does not identify which historical pathways produced the mathematics or instruments involved.

Table 3: Why belief in order is neither a complete method nor a scientific result.

Requirement	Question it answers	Why generic order is insufficient
Specified prediction	What observable difference should appear?	“Nature is ordered” leaves countless incompatible patterns open.
Measurement and calibration	How will the difference be detected reliably?	Confidence does not identify instrument error or measurement scale.
Comparison and control	Which causal account best explains the difference?	Many ordered models fit the same uncontrolled observation.
Public criticism and replication	Can others expose mistakes and recover the result?	Private conviction can remain stable while a claim is false.
Institutional memory	How are failures, methods, and corrections retained?	A worldview alone does not build archives, journals, laboratories, or training.

The better historical question is therefore not “Who first believed in order?” It is “Which combinations of ideas, skills, materials, institutions, incentives, and exchanges made particular forms of inquiry durable?” That question has many answers and changes across place and time.

5. Christian Contribution Without Christian Proprietorship

Rejecting monopoly does not require a counter-myth in which Christianity is irrelevant or uniformly hostile to science. Historians have documented significant relations among biblical interpretation, natural philosophy, educational institutions, theological commitments, and early modern inquiry. Harrison argues that Protestant approaches to reading scripture helped transform readings of nature (Harrison, 1998). Grant assigns medieval Latin universities and theology important roles while also stressing the Greek and Islamic materials on which Latin learning depended (Grant, 1996). Merton’s classic study connected Puritan values with seventeenth-century English science, even though the reach and form of the thesis remain debated (Merton, 1938).

Christian advocates can therefore make a defensible contribution claim. Pearcey and Thaxton’s explicitly Christian history presents natural philosophy as deeply connected with Christian intellectual heritage (Pearcey & Thaxton, 1994). That kind of account deserves historical engagement, not dismissal by slogan. The decisive constraint is logical: evidence that a tradition encouraged some investigators does not show that no other tradition could encourage inquiry or that the human expectation of regularity originated there.

Brooke’s history resists one-word verdicts such as perennial conflict or timeless harmony because relations between scientific and religious commitments vary by episode (Brooke, 2014). Harrison later adds that the modern categories “science” and “religion” themselves should not simply be projected backward unchanged (Harrison, 2015). These cautions cut both ways. They block a simplistic secular triumph story, and they also block a triumphalist Christian proprietorship story.

The proportional conclusion

Christian beliefs, texts, and institutions can be historically contributory without being cognitively necessary, institutionally sufficient, or culturally exclusive. Participation is an evidence-sensitive claim. Proprietorship is a universal claim that the same evidence does not entail.

The word “contributed” must also remain specific. Which belief? Which institution? Which investigator? Which practice? What comparator? A doctrine may motivate one line of inquiry while constraining another. A

university may preserve disputation and learning while limiting who participates. A scriptural reading practice may encourage literal attention while directing research toward theological ends. Historical causes do not become unreal because they are mixed; they become more accurate when their scope is stated.

6. The Induction Problem Is Not Solved by Citation to Scripture

The expectation that an observed regularity will continue is not the same as a deductive proof that it must continue. Hume's discussion of induction asks what justifies moving from experienced conjunctions to unobserved cases; the past occurrence of a pattern does not deductively entail its future continuation (Hume, 1748). Goodman later showed that indefinitely many descriptions can fit past observations while projecting differently into the future (Goodman, 1955). The problem is not merely a lack of courage to trust nature. It concerns which projections are warranted and why.

Appealing to the faithfulness of the biblical deity may supply a believer with a broad reason to expect some intelligibility. It does not identify the regularity relevant to a particular case. Stable nature includes phase transitions, radioactive probabilities, chaotic sensitivity, evolutionary change, earthquakes, and emergent behavior. A dependable world need not be simple, deterministic, uniform at every scale, or transparent to unaided perception.

The appeal also inherits a specification problem. Biblical narratives include both ordinary continuities and exceptional acts attributed to divine agency. A Christian investigator must still decide whether an anomaly reflects an intervention, a misunderstood natural process, a contaminated sample, an instrument fault, or noise. Scripture does not supply a public schedule of exceptions. In practice, the investigator checks calibration, controls, auxiliary assumptions, and replication. Those disciplines manage uncertainty without first settling the metaphysics of providence.

This does not mean that science has philosophically refuted the induction problem. It means that science manages it fallibly. Reliable projections are local, model-dependent, and corrigible. They earn trust by surviving tests and comparisons, not by becoming deductively certain. A worldview may offer a wider explanation of why this practice works; it does not relieve the worldview's adherent of using the same error-correcting practice.

7. The Metaphysical Retreat Does Not Restore Ownership

When the cognitive and historical claims fail, the proprietorship argument often retreats: perhaps non-Christians can notice regularities, but only Christian theism can *ground* them. This is a different argument. Its conclusion, if successful, would concern the ultimate explanation of an ordered world, not who can detect order or which tradition produced science.

The distinction can be made with a simple analogy. A physicist may successfully predict an eclipse without knowing the ultimate metaphysics of laws. An engineer may build a bridge without settling whether mathematical objects are discovered or invented. Likewise, an ancient observer may exploit planetary cycles without deciding why there is a cosmos capable of stable cycles. Epistemic access to a pattern does not require possession of its final explanation.

Nor does the word "law" establish a lawgiver by definition. Scientific laws are mathematical or verbal generalizations used to describe, organize, and predict phenomena. The juridical metaphor can inspire a theological interpretation, but the metaphor is not itself an argument. To establish a specified deity as the best explanation, one must compare explanatory scope, fit, simplicity, prior commitments, the problem of irregularity, rival forms of theism, and non-theistic accounts. The proprietorship claim cannot skip that comparison by turning a shared word into a causal conclusion.

Even a successful metaphysical argument would leave the historical record unchanged. Babylonian calculations would still predate Christianity. Chinese gnomon practices would still be non-biblical. Islamic astronomers would still have developed and transmitted mathematical models. Infants and animals would still learn patterns without doctrine. The Christian metaphysical explanation might redescribe the ultimate source of all these capacities; it would not make scripture their historical owner.

8. Common Moves and What Each Concedes

The argument becomes clearest when common apologetic moves are stated charitably and their implications separated. The lines below are hypothetical composite formulations, not quotations attributed to any one author.

Table 4: Hypothetical apologetic moves and the claims they can support.

Hypothetical move	What it may establish	What it does not establish
“Christian thinkers expected a rational creation, and that expectation encouraged investigation.”	A motivation or background assumption for specified thinkers.	That the expectation was unavailable elsewhere or sufficient for scientific institutions.
“Modern science arose in Christian Europe rather than in every culture that observed nature.”	A location requiring causal explanation and comparative history.	That biblical belief was the necessary or exclusive cause of every relevant practice.
“Non-Christian observers borrowed the order that the biblical deity created, even if they did not know it.”	A possible metaphysical interpretation of their success.	That scripture caused their cognition or that their inquiry depended on possessing it.
“Natural laws make better sense as the work of a lawgiver.”	An invitation to compare metaphysical explanations.	A result established by the legal metaphor or a license to bypass rival God-concepts and non-theistic accounts.
“Biblical exceptions are purposeful, not disorderly.”	Internal compatibility between providence and some regularity.	A public rule identifying when to expect an exception or how to test a scientific anomaly.

Each move can be coherent after its scope is narrowed. The narrowing is not a rhetorical trick; it identifies the conclusion the evidence can actually bear. A motivation claim is not a monopoly claim. A geographic fact is not a complete causal explanation. A metaphysical redescription is not a psychological dependency. Internal compatibility is not public confirmation.

9. Strong Objections

9.1 “You have described learning, not science”

Correct: infant segmentation and animal conditioning are not science. They answer the cognitive claim that expectation of regularity requires scripture. Babylonian calculation, Chinese observational mathematics, Islamic astronomy, and craft traditions then answer stronger historical versions by showing organized regularity-based inquiry outside biblical dependence. Modern science adds further institutions and norms; the paper does not collapse these levels.

9.2 “Modern science nevertheless emerged in Christian Europe”

The location matters, but “emerged there” does not mean “could emerge only there” or “was produced by one factor there”. European inquiry drew on Greek, Arabic, Hebrew, and Latin texts; instruments, printing, trade, universities, patronage, workshops, confessional conflicts, and new information all mattered. Christian commitments belong in that history. Treating them as the sole necessary cause requires comparative evidence stronger than their presence at the outcome.

9.3 “Evolutionary learning already assumes a regular universe”

Yes. Any process that retains information across time requires enough stability for earlier states to constrain later ones. That concession supports the paper. It locates regularity before scriptural interpretation. If the objection shifts to the ultimate cause of that stability, the discussion has moved from cognitive dependence to metaphysics, where additional argument is required.

9.4 “A Christian God-concept explains both order and our capacity to recognize it”

That is a coherent package explanation. The present argument does not disprove it. It asks whether the package has been shown to be uniquely best and whether its truth would entail biblical proprietorship. The second inference still fails: a cause can enable many agents who neither know nor cite it. If the deity specified by the account created every human cognitive capacity, scripture need not be the route by which those capacities operate.

9.5 “Non-biblical traditions mixed observation with myth and divination”

They did. Early modern European inquiry likewise mixed what later readers separate as theology, astrology, alchemy, natural magic, mechanics, and observation. Historical mixture is a reason to avoid anachronism, not a reason to erase successful measurement or calculation selectively. The relevant question is what practices tracked stable relations and how they were tested, transmitted, and corrected.

10. A Better Account: Participation, Transmission, and Correction

A non-proprietary history can make stronger claims because it does not need to protect a single origin story. Human perceptual and learning systems supply baseline sensitivity to regularity. Skilled communities convert that sensitivity into techniques. States, temples, markets, workshops, courts, schools, and religious institutions preserve some techniques and suppress or neglect others. Translation moves problems across languages. Mathematical tools make new relations expressible. Instruments make new phenomena observable. Public criticism makes some errors expensive to retain. No element alone is science; together, in changing combinations, they produce scientific practices.

Christian traditions appear within that account as participants. They contribute doctrines, metaphors, institutions, questions, prohibitions, motivations, and interpretive habits. Their influence can be constructive in one episode, constraining in another, and ambiguous in a third. The same evidence-sensitive treatment applies to Islamic, Chinese, Jewish, Greek, and secular institutions. A plural history is not a ceremonial distribution of credit. It is a causal claim that must be established case by case.

For readers using the proprietorship argument, the practical test is simple:

1. State whether the claim is cognitive, historical, or metaphysical.
2. Name the specific Christian belief, text, institution, or actor alleged to be causal.
3. Identify what should be absent if that factor were genuinely necessary.

4. Check for counterexamples at the same level of analysis.
5. Distinguish necessary, sufficient, contributory, enabling, and merely compatible conditions.
6. Credit plural transmission rather than treating borrowed or transformed resources as if they originated at their final destination.

This test preserves defensible Christian claims. It also makes inflated claims visible. If counterexamples force “necessary” to become “helpful in some settings”, the argument has not survived unchanged. It has become the participation thesis defended here.

11. Conclusion

The expectation of an orderly universe is not a biblical invention. Regularity-sensitive learning appears in nonhuman animals and infants who possess no doctrine. Skilled practice uses recurring relations before it states a philosophy of them. Babylonian, Chinese, Greek, Islamic, and other traditions observed, calculated, transmitted, and corrected patterns outside biblical dependence. These facts defeat the claim that scripture is necessary for recognizing order or engaging in systematic inquiry.

The history of modern science remains more demanding than this refutation. Christian beliefs, scriptural interpretation, universities, and communities contributed to important European developments. So did translated mathematics, non-Christian astronomy, instruments, workshops, patronage, criticism, and the institutional retention of error. Influence is real; proprietorship does not follow.

The metaphysical question remains open at the boundary of this paper. A Christian God-concept may be offered as an explanation of why the world is intelligible. That proposal must be compared with alternatives on philosophical grounds. Even if it succeeds, it does not show that scripture produced the human capacity to learn, that scientific practice requires biblical assent, or that one tradition owns induction. The rational revision is therefore precise: replace “science needed the Bible” with historically specified claims about when, where, and how Christian participants helped inquiry—and apply the same evidential standard to every other participant.

A. Formal Reconstruction of the Central Thesis

The central argument is best reconstructed in ordinary language because its decisive steps concern necessity, counterexamples, and distinctions among levels of explanation rather than disputed numerical probabilities.

A.1 The cognitive dependency argument

- P1.** If possession of biblical teaching is necessary for regularity-detection, no agent lacking that teaching can reliably learn predictive relations.
- P2.** Nonhuman animals, prelinguistic infants, and humans outside biblical instruction reliably learn at least some predictive relations.
- P3.** Therefore, possession of biblical teaching is not necessary for regularity-detection.

The inference is valid: one counterexample defeats a universal necessity claim. The second premise has direct empirical and historical support, although no learning system is perfectly reliable and the kinds of regularity learned differ.

A.2 The historical proprietorship argument

- P1.** If biblical Christianity uniquely owns systematic regularity-based inquiry, systematic observation, mathematical prediction, or corrective technical practice should not arise independently of biblical dependence.
- P2.** Babylonian, Chinese, Greek, Islamic, and cumulative craft traditions exhibit such practices outside biblical dependence.
- P3.** Therefore, biblical Christianity does not uniquely own systematic regularity-based inquiry.
- P4.** Modern science developed through a narrower and more institutionally complex history than systematic inquiry in general.
- P5.** Evidence that Christian beliefs or institutions contributed to that narrower history does not entail that they were its sole necessary or sufficient cause.
- P6.** Therefore, Christian contribution is compatible with the rejection of Christian proprietorship over science.

The first conclusion follows if the historical counterexamples meet the stated threshold; the cited cases support that premise without claiming that ancient inquiry was identical to modern science. The second conclusion is conceptual: contribution does not entail necessity, sufficiency, or exclusivity. Claims about the magnitude of particular contributions remain historical and defeasible.

A.3 The metaphysical non sequitur

- P1.** A successful metaphysical explanation of why regularity exists does not by itself identify the psychological route by which agents detect regularity or the historical causes of scientific institutions.
- P2.** The claim that a Christian God-concept explains regularity is a metaphysical claim.
- P3.** Therefore, that claim does not by itself establish that scripture caused regularity-detection or was historically necessary for science.

This inference is valid as a restriction on what follows from the metaphysical premise. The appendix does not establish whether the Christian explanation is true or uniquely best. It establishes only that even its truth would leave a further argument necessary before cognitive or historical proprietorship could follow.

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