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# DE REVOLUTIONIBUS VERITATIS: THE LOCK

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![[LE\_00.png]]

*De [[Revolutionibus Veritatis]]* (“On the Revolutions of Truth”) honors Copernicus and names a re-centering of truth analogous to the re-centering of the cosmos.

## [[Principia Mathematica]] Moralia — The Information-Theoretic Derivation of Divine Existence from the Necessary Properties of [[Mathematical Truth]]

David Lowe | Theophysics | 2025

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### Abstract

This paper presents a formal derivation of the necessary existence of a morally good, eternal, universal, immaterial, and coherent ground of mathematical truth. Using information-theoretic formalization—including [[Shannon]] entropy, Kolmogorov complexity, and Chaitin's incompleteness theorem—we demonstrate that mathematical truth cannot be self-grounding and must originate from an external source. Through a chain of twenty axioms, each individually undeniable, we establish that this source must possess properties isomorphic to the classical divine attributes. The critical axiom (A11) demonstrates that the non-deceptive nature of mathematical truth—a moral property—must be inherited from its source, thereby deriving morality from information theory and bridging the is-ought gap. The paper addresses all major objections from the

literature, including the Platonic objection, the fictionalist challenge, the evolutionary debunking argument, and the problem of mathematical applicability. We conclude with testable predictions and experimental protocols.

*[!tip] Series Navigation This is **Paper 1 of 4** in De [\[\[Revolutionibus Veritatis\]\]](#).*

- **Paper 1** (this document): *The formal derivation — 20 axioms, boundary conditions, symbolic proof.*
- [\[\[o1\\_DE REVOLUTIONIBUS VERITATIS THE ARCHITECTURE|De \[\[Revolutionibus Veritatis\]\]: The Architecture\]\]](#): *The scientific architecture explained accessibly — why these derivations work.*
- [\[\[o3\\_DE REVOLUTIONIBUS VERITATIS THE COST OF DENIAL|De \[\[Revolutionibus Veritatis\]\]: The Cost of Denial\]\]](#): *The existential negation — what you must become to deny this.*
- [\[\[o4\\_DE REVOLUTIONIBUS VERITATIS THE KEY|De \[\[Revolutionibus Veritatis\]\]: The Key\]\]](#): *Christianity tested against all 20 axioms — specification and fulfillment.*

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## I. Introduction

Eugene Wigner's celebrated paper "The Unreasonable Effectiveness of Mathematics in the Natural Sciences" (1960) posed a question that remains unanswered in contemporary philosophy of mathematics: Why do abstract mathematical structures, developed without reference to physical reality, consistently and precisely describe that reality? This paper provides a definitive answer: the effectiveness is not unreasonable but inevitable, once we understand what mathematical truth is and where it comes from.

We proceed in five stages: (1) establishing the information-theoretic foundations, (2) deriving the properties of mathematical truth through twenty axioms, (3) demonstrating that these properties necessitate an external ground with specific characteristics, (4) addressing all major objections, and (5) presenting testable predictions.

**Central Claim:** Mathematical truth is grounded in a necessary, eternal, universal, immaterial, coherent, and morally good source. This source is functionally identical to the Logos of classical theology. This conclusion is not asserted but derived from first principles using information theory.

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## II. Information-Theoretic Foundations

![[LE\_o2.png]]

### 2.1 [[Shannon]] Entropy

**Definition 1 ([[Shannon]] Entropy):** For a discrete random variable  $X$  with possible values  $\{x_1, x_2, \dots, x_n\}$  and probability mass function  $P(X)$ , the [[Shannon]] entropy  $H(X)$  is defined as:

$$H(X) = -\sum_i P(x_i) \log_2 P(x_i)$$

[[Shannon]] entropy measures the average information content or uncertainty in a random variable. Maximum entropy occurs when all outcomes are equally likely (maximum uncertainty); minimum entropy occurs when one outcome has probability 1 (no uncertainty).

### 2.2 [[Kolmogorov Complexity]]

**Definition 2 ([[Kolmogorov Complexity]]):** For a string  $x$  and a universal Turing machine  $U$ , the Kolmogorov complexity  $K(x)$  is the length of the shortest program  $p$  such that  $U(p) = x$ :

$$K(x) = \min\{|p| : U(p) = x\}$$

Kolmogorov complexity measures the intrinsic information content of a string— independent of any probability distribution. A string is random (or incompressible) if  $K(x) \approx |x|$ ; it is structured (or compressible) if  $K(x) \ll |x|$ .

### 2.3 The Compression-Entropy Bridge

**Theorem 1 (Compression-Entropy Bridge):** For a random string sampled from distribution  $X$ ,  $K(x) \approx H(X)$ . For a structured string,  $K(x) \ll H(X)$ .

**Proof:** Random strings have no exploitable patterns; their shortest description is the string itself. Structured strings have patterns that allow compression below their raw length.  $\square$

**Critical Observation:** The physical universe exhibits  $K \ll H$ . Physical laws are compressions—short equations that describe vast amounts of phenomena. The existence

of any physical law means the universe is not random but is compressed information. This observation is foundational to everything that follows.

## 2.4 Chaitin's [Incompleteness Theorem]

**Theorem 2 (Chaitin's Incompleteness):** For any formal system  $F$ , there exists a constant  $c$  such that  $F$  cannot prove  $K(x) > |F| + c$  for any string  $x$ .

$$\forall F, \exists c : F \nvdash K(x) > |F| + c$$

**Corollary 1:** Mathematical truth cannot be fully grounded from within mathematics itself.

$$\text{Ground}(\text{Math}) \notin \text{Math}$$

This is the formal statement that mathematical truth requires an external ground. No formal system can fully capture or justify the truths it uses. The ground of mathematics must be meta-mathematical.

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## III. The Axiom Chain

![[LKL\_02.png]]

We present twenty axioms organized into six levels. Each axiom is individually undeniable—its negation leads to absurdity, self-refutation, or the collapse of rational discourse. Together, they derive the existence and properties of the ground of mathematical truth.

### Level 1: Existence (A1–A3)

**A1 (Existence):** Mathematical truths exist that are non-contingently true.

$$\exists T_m : \text{True}(T_m) \wedge \neg \text{Contingent}(T_m)$$

*Undeniability:* If no mathematical truths existed, then "no mathematical truths exist" would itself be a mathematical truth (a claim about the nature of mathematical claims), yielding a contradiction. The denial of A1 is self-refuting.

**A2 (Temporal Independence):** Mathematical truths held at all times prior to human existence and will hold after.

$$\forall t : \text{True}(T_m, t) \text{ with } I(T_m; t) = 0$$

*Undeniability:* If mathematical truths only became true when humans evolved, then physical laws (which are mathematical) could not have operated for 13.8 billion years before us. Stars could not have formed. The universe could not exist in its present state. Denial leads to empirical absurdity.

**A3 (Necessity):** Mathematical truths are necessarily true; their negations are impossible.

$$\square(2+2=4) \wedge \neg\diamondsuit(2+2=5)$$

*Undeniability:* If  $2+2=5$  were possible in some world, logical inference would be arbitrary and could not be trusted. But we cannot even state that possibility without presupposing the validity of logic. The denial is self-undermining.

## Level 2: Properties (A4–A7)

**A4 (Universality):** Mathematical truth is location-invariant.

$$I(T_m; \text{position}) = 0$$

*Undeniability:* If mathematical truth varied by location, physics would be different in different places. GPS would not work. Rockets could not navigate. No coherent universe could exist with location-dependent mathematics.

**A5 (Eternality):** Mathematical truth does not change over time.

$$\frac{d}{dt} K(T_m) = 0$$

*Undeniability:* If  $2+2=4$  today but might equal 5 tomorrow, scientific knowledge would be impossible. Every experiment would be meaningless, as its mathematical basis could shift. Science presupposes A5.

**A6 (Immateriality):** Mathematical truth has no spatial location, mass, or physical properties.

$$\neg\exists x : \text{Location}(T_m) = x \wedge \text{Mass}(T_m) = 0$$

*Undeniability:* If mathematical truth were physical, destroying its location would destroy the truth. But no physical destruction can make  $2+2 \neq 4$ . Mathematical truth is immune to physical intervention.

**A7 (Coherence):** No true mathematical statement contradicts another true mathematical statement.

$$\forall T_1, T_2 \in T_m : \neg(T_1 \wedge \neg T_2)$$

*Undeniability:* By the principle of explosion (*ex falso quodlibet*), a contradiction implies everything. If mathematics were internally contradictory, every statement would be provable, and mathematics would be trivial and useless.

![[LE\_04.png]]

*[!important] Checkpoint Alpha: The Emergent Profile From axioms A1–A7, we have established that mathematical truth is: **existent, necessary, eternal, universal, immaterial, and coherent**. This profile matches no physical object in the universe. But it is precisely isomorphic to the classical divine attributes: Being (exists), Aseity (necessary), Eternality, Omnipresence (universal), Spirituality (immaterial), and Integrity (coherent).*

*We have derived these properties from the analysis of mathematical truth alone, not from theological premises. The theological identification comes after the logical derivation.*

### Level 3: Origin (A8–A11)

**A8 ([[Sufficient Reason]]):** Mathematical truth requires grounding; brute facts are explanatorily unacceptable.

$$K(T_m | \text{Ground}) < K(T_m) \rightarrow \exists \text{Ground}(T_m)$$

*Undeniability:* The Principle of [[Sufficient Reason]] is presupposed by all rational inquiry. To ask "why?" is to presuppose that explanations exist. If mathematical truths were brute facts requiring no explanation, then nothing would require explanation, and science would be impossible.

**A9 (Not From Nothing):** Nothing cannot produce something.

$$K(\emptyset) = 0 \rightarrow \text{Output}(\emptyset) = \emptyset$$

*Undeniability:* "Nothing" has zero information content by definition. An output requires information. Zero information cannot produce non-zero information. This is not a metaphysical claim but an information-theoretic necessity.

**A10 (Not From Chaos):** Random processes cannot produce structured output.

$$K(T_m) \ll |T_m| \rightarrow \neg \text{Random}(\text{Ground})$$

*Undeniability:* Random processes produce maximum entropy. But mathematical truth is highly structured (compressible). The Kolmogorov complexity of mathematical truths is vastly less than their raw description length. This structure cannot emerge from randomness—it requires a structured source.

**A11 (Not From Deception):** Truth cannot originate from a deceptive source.

$$\neg \text{Deceptive}(T_m) \rightarrow \neg \text{Deceptive}(\text{Ground})$$

*Undeniability:* Deception is defined as divergence between appearance and reality:  $\text{Deception}(X) \iff \text{Appears}(X,Y) \wedge \neg \text{Is}(X,Y)$ . Mathematical truth involves no such divergence— $2+2$  appears to equal 4 and actually does equal 4. If the source of mathematical truth were deceptive, its outputs could not reliably be non-deceptive. But mathematical truths are non-deceptive. Therefore, the source must be non-deceptive.

![[LE\_05.png]]

*[!danger] The Critical Transition: From Logic to Morality A11 is the keystone of this entire argument. Being non-deceptive is a **moral property**. Truthfulness is a virtue; deception is a vice. This is not a contested philosophical claim—it is a cultural and ethical universal. Deception is wrong in every moral framework that has ever existed.*

*By A11, the ground of mathematical truth must be non-deceptive. By the universality of the moral status of truthfulness, the ground must possess a moral virtue. We have **derived a moral property from information-theoretic analysis** of mathematical truth.*

**Corollary 2:** *The ground of mathematical truth is morally good (at least with respect to truthfulness).*

## Level 4: Source Properties (A12–A15)

![[LE\_07.png]]

The ground of mathematical truth must share the properties of what it grounds, or it could not confer those properties.

**A12:** The source of universal truth must itself be universal. **A13:** The source of eternal truth must itself be eternal. **A14:** The source of immaterial truth must itself be immaterial. **A15:** The source of coherent truth must itself be coherent.

*Undeniability (for A12–A15):* A source cannot confer properties it does not possess. A local source cannot produce universal output. A temporal source cannot produce eternal output. A material source cannot produce immaterial output. An incoherent source cannot produce coherent output. These are applications of the principle that effects cannot exceed their causes in the relevant respects.

## **Level 5: The Moral Dimension (A16–A18)**

**A16 (Truth as Value):** Truth is inherently valuable; falsehood is inherently disvaluable.

*Undeniability:* Even the relativist who claims "there is no objective truth" intends that statement to be objectively true. The value of truth is presupposed by every assertion, every argument, every inquiry.

**A17 (Deception as Wrong):** Deception is morally wrong.

*Undeniability:* This is a cultural universal. Every known moral system condemns deception. Even the liar must pretend truthfulness, implicitly acknowledging the normative force of truth.

**A18 (Mathematical-Moral Unity):** The source of mathematical truth and the source of moral truth are identical.

*Undeniability:* By A11, the ground of mathematical truth must be non-deceptive (a moral property). The ground therefore possesses moral properties. By parsimony (Occam's razor), we should not multiply entities beyond necessity. If the ground of mathematical truth has moral properties, it is more parsimonious to identify it with the ground of morality than to posit two separate grounds.

## **Level 6: Identification (A19–A20)**

**A19 (The Logos):** The ground of mathematical and moral truth is the Logos—a unified, rational, moral source.

*Undeniability:* We use the term "Logos" (λόγος) because it precisely captures what we have derived: rational structure (mathematical truth) unified with moral order. The term

predates Christianity, appearing in Heraclitus, the Stoics, and Philo before its Christian appropriation.

**A20 (The Identification):** The Logos is functionally identical to the God of classical theism.

*Undeniability:* The Logos, as derived, possesses: necessary existence, eternity, universality (omnipresence), immateriality (spirituality), coherence (integrity), rationality, and moral goodness. This is the complete profile of the God of classical theism. Since the properties are identical, either they refer to the same entity, or there exist two entities with identical profiles—which violates the identity of indiscernibles.

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## IV. The Is-Ought Bridge

![[LE\_05.png]]

Hume's guillotine claims that "ought" cannot be derived from "is"—that no amount of factual description can logically entail a normative prescription. This paper dissolves that problem by demonstrating that information theory is inherently normative.

### 4.1 [[Shannon]]'s Channel Coding Theorem

$R < C \rightarrow \exists P_e \rightarrow 0$

This theorem tells you what you *should* do: keep your transmission rate below channel capacity if you want reliable communication. It is a mathematical theorem that entails a prescription. The "ought" is built into the mathematics.

### 4.2 Kolmogorov Optimality

$K(x) = \min\{|p| : U(p) = x\}$

The definition of Kolmogorov complexity defines the *best* (shortest) description. "Best" is a normative term. The definition itself embeds an ought.

### 4.3 The Dissolution

Information theory contains built-in "oughts": you ought to compress efficiently, transmit below capacity, minimize description length, and not deceive (produce

divergence between signal and reality). These are not human conventions. They are mathematical necessities. The is-ought gap is bridged by the inherent normativity of information itself. Information is normative, and normativity is informational.

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## V. Objections and Responses

### O1: The Platonic Objection

*Objection:* Mathematical truths exist in a Platonic realm of abstract objects. They require no ground beyond their own abstract existence.

*Response:* The Platonic realm must answer to A8 ([[Sufficient Reason]]). Why does this realm exist rather than not? Positing abstract objects does not explain them. Moreover, Platonism faces the epistemological objection (Benacerraf 1973): how do concrete minds access abstract objects? Our account provides that epistemic connection—human minds access mathematical truth because both are grounded in the same rational source.

### O2: The Fictionalist Challenge

*Objection:* Mathematical statements are useful fictions, not literally true.

*Response:* Fictionalism cannot account for the applicability of mathematics. Sherlock Holmes cannot predict the trajectory of rockets or the behavior of electrons. If mathematical statements were fictions, their systematic applicability would be an inexplicable miracle. Moreover, the fictionalist must explain the constraints on mathematical fiction—why can't we consistently "make up" that  $2+2=5$ ?

### O3: The Evolutionary Debunking Argument

*Objection:* Our mathematical intuitions evolved for survival, not truth-tracking.

*Response:* Self-undermining. If our cognitive faculties are unreliable, then so is the reasoning that produced this objection. It saws off the branch it sits on.

### O4: The Naturalistic Objection

*Objection:* Mathematics can be grounded in physical structures—in brains, computation, physical regularities.

*Response:* By A6, mathematical truth is immaterial. No physical structure can ground something that has no physical properties. By A2, mathematical truth predates all physical structures. No temporal physical entity can ground an eternal truth.

## **O5: The Multiverse Objection**

*Objection:* Perhaps mathematical truths vary across universes.

*Response:* This equivocates between mathematical truth and physical law. Physical constants might vary; mathematical truths cannot.  $2+2=4$  is necessary (A3)—there is no possible world in which it is false.

## **O6: The Conceivability Objection**

*Objection:* I can conceive of mathematical truths existing without a divine ground.

*Response:* Conceivability does not imply metaphysical possibility. We can conceive of water not being H<sub>2</sub>O, but this is metaphysically impossible given the nature of water.

## **O7: The "Which God?" Objection**

*Objection:* This only establishes the existence of a Logos, not the God of any specific religion.

*Response:* Correct as stated. This argument establishes properties. Which religion correctly identifies this ground is a further question. However, the Johannine identification of Jesus Christ with the Logos ([John 1:1]–14) is a direct claim that the specific entity we have derived is the Christian God. See **[[Paper 4 - The Fulfillment]]** for the full analysis.

## **O8: The Euthyphro Dilemma**

*Response:* False dilemma resolved by divine simplicity. Mathematical truths flow from God's nature—neither arbitrarily willed nor externally constraining. They are expressions of the divine Logos.

## **O9: The Parsimony Objection**

*Response:* Occam's razor says not to multiply entities beyond *necessity*. This paper argues the ground *is* necessary. One unified ground is more parsimonious than separate,

unrelated explanations.

## O10: The Coherence Objection

*Response:* The coherence of the derived Ground is guaranteed by A7 and A15. Apparent paradoxes arise from informal formulations, not from the rigorously derived Logos.

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# VI. Testable Predictions and Experimental Protocols

**P1 (Landauer Confirmation):** Information erasure requires minimum energy  $E = k_B T \ln 2$ . **Status: CONFIRMED** (Bérut et al., 2012).

**P2 (Measurement-Information Coupling):** Quantum measurement energy scales with information gain:  $\Delta E = k_B T \cdot \Delta H$ . **Status: TESTABLE.**

**P3 (Consciousness-Collapse Correlation):** Conscious observation correlates with wavefunction collapse probability:  $P(\text{collapse}) = f(\Phi)$ . **Status: TESTABLE.**

**P4 (Moral-Mathematical Neural Correlation):** Brain regions active during mathematical cognition overlap with regions active during moral cognition. **Status: TESTABLE.**

**P5 (Coherence Amplification):** Collective intentionality amplifies local coherence:  $\chi_{\text{collective}} = N^\alpha \cdot \chi_{\text{individual}}$ , where  $\alpha > 1$ . **Status: SUPPORTED** (GCP data,  $6\sigma$  deviations).

**P6 (Compression-Applicability Correlation):** The applicability of a mathematical theory to physics correlates with its Kolmogorov complexity: lower  $K(\text{theory})$  implies higher applicability. **Status: TESTABLE.**

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# VII. The Law Written on Hearts

Romans 2:15 states that Gentiles "show the work of the law written in their hearts." This paper provides a formal mechanism for this theological claim.

Let  $f : \text{Human} \rightarrow T_m$  denote the access function by which humans recognize mathematical truths. Let  $T_m \subset \text{Logos}$  denote the grounding relation established by this paper.

By transitivity:  $f : \text{Human} \rightarrow \text{Logos}$ . Humans have direct cognitive access to the Logos through the mathematical faculty.

This faculty is universal, pre-linguistic, non-arbitrary, and normative—exactly the properties of divinely inscribed moral law as described in the theological tradition.

## VIII. Conclusion

![[LE\_12.png]]

The Complete Argument (Formal Summary):

$$\exists T_m : \square T_m \wedge \text{Universal}(T_m) \wedge \text{Eternal}(T_m) \wedge \text{Coherent}(T_m)$$

$$K(T_m | \text{Ground}) < K(T_m) \rightarrow \exists \text{Ground}(T_m)$$

$$\text{Ground} \neq \emptyset \wedge \neg \text{Random}(\text{Ground}) \wedge \neg \text{Deceptive}(\text{Ground})$$

$$\neg \text{Deceptive} = \text{Truthful} = \text{Moral Property}$$

$$\therefore \text{Ground}(T_m) = \text{Moral}$$

$$f : \text{Human} \rightarrow T_m \wedge T_m \subset \text{Logos} \rightarrow f : \text{Human} \rightarrow \text{Logos}$$

$$\text{Physics} = \text{Applied } T_m \rightarrow \text{Physics is Moral}$$

$$\therefore \text{Universe is Moral Order} \quad \blacksquare$$

*"This most beautiful system of equations, constants, and laws, could only proceed from the counsel and dominion of a truthful and moral Being." —Adapted from Newton's Principia*

# [[Semantic Map]]: oo\_DE REVOLUTIONIBUS VERITATIS.md

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## Summary

Axiom: 4 Claim: 10 EvidenceBundle: 8 Theorem: 2 Relationship: 8

## Tags (32 total)

- [Axiom] Existence of a morally good ground of mathematical truth (3de3422c)
- [Axiom] Logos as coherent ground of truth (1022c722)
- [Claim] Christianity satisfies all 20 axioms (009056ae)
- [Claim] Five alternative worldviews tested against constraints (ae4729fo)
- [Claim] Physical and spiritual laws share identical mathematical structure (b1a2c3d4)
- [Claim] Institutional entropy cycle is thermodynamically inevitable (c2b3d4e5)
- [Claim] Mathematics is man-made position formally closed by [[Soteriological Limit]] (a1b2c3d4)
- [EvidenceBundle] Probability of worldviews satisfying constraints (5929e128)
- [EvidenceBundle] Papers 1-3 derive requirements from foundational theories (4c263db5)
- [EvidenceBundle] PEAR-LAB 6.35 $\sigma$ , GCP 6 $\sigma$ , PROP-COSMOS 5.7 $\sigma$  (d3c4e5f6)
- [EvidenceBundle] Developmental cognition: ANS, helper/hinderer, moral universals (f1e2d3c4)
- [Theorem] Incoherence of [[Materialist Consensus]] (9506ed85)
- [Theorem] Incoherence of the [[Eternal Loop]] (b8940d1b)
- [Relationship] Axioms derive from information theory (001c765c)
- [Relationship] Christianity as fulfillment of axioms (f5192a5a)
- [Relationship] [[Master Equation]] variables and their roles (123bdaca)
- [Relationship] [[Ten Laws]] physical-spiritual isomorphism (e4d5f6a7)
- [Axiom] Existence of a morally good ground of mathematical truth (aab278ba)

- [Axiom] Logos as coherent ground of truth (b5c9822c)
- [Claim] Christianity satisfies all 20 axioms (072e1e24)
- [Claim] Five alternative worldviews tested against constraints (2e6817c8)
- [Claim] Physical and spiritual laws share identical mathematical structure (4cda8265)
- [Claim] Institutional entropy cycle is thermodynamically inevitable (1f4f6f42)
- [Claim] Mathematics is man-made position formally closed by [[Soteriological Limit]] (0e35edc8)
- [EvidenceBundle] Probability of worldviews satisfying constraints (1dcf3ef5)
- [EvidenceBundle] Papers 1-3 derive requirements from foundational theories (c4f54d03)
- [EvidenceBundle] PEAR-LAB 6.35 $\sigma$ , GCP 6 $\sigma$ , PROP-COSMOS 5.7 $\sigma$  (ef9393f9)
- [EvidenceBundle] Developmental cognition: ANS, helper/hinderer, moral universals (c3915952)
- [Relationship] Axioms derive from information theory (8861ccbd)
- [Relationship] Christianity as fulfillment of axioms (7cb8971e)
- [Relationship] [[Master Equation]] variables and their roles (7ad22db9)
- [Relationship] [[Ten Laws]] physical-spiritual isomorphism (2b8f8d4a)

# [[Mermaid Diagram]]

```
graph TD
  n0(["Axiom: Existence of a morally good ground of mathematical"])
  n1(["Axiom: Logos as coherent ground of truth"])
  n2["Claim: Christianity satisfies all 20 axioms"]
  n3["Claim: Five alternative worldviews tested against constraints"]
  n4["Claim: Physical and spiritual laws share identical mathematical"]
  n5["Claim: Institutional entropy cycle is thermodynamically irreversible"]
  n6["Claim: Mathematics is man-made position formally closed by"]
  n7(["EvidenceBundle: Probability of worldviews satisfying constraints"])
  n8(["EvidenceBundle: Papers 1-3 derive requirements from foundations"])
  n9(["EvidenceBundle: PEAR-LAB 6.35σ, GCP 6σ, PROP-COSMOS 5.7σ"])
  n10(["EvidenceBundle: Developmental cognition: ANS, helper/helper"])
  n11["Theorem: Incoherence of [[Materialist Consensus]]"]
  n12["Theorem: Incoherence of the [[Eternal Loop]]"]
  n13>"Relationship: Axioms derive from information theory"
  n14>"Relationship: Christianity as fulfillment of axioms"
  n15>"Relationship: [[Master Equation]] variables and their roles"
  n16>"Relationship: [[Ten Laws]] physical-spiritual isomorphism"
  n17(["Axiom: Existence of a morally good ground of mathematical"])
  n18(["Axiom: Logos as coherent ground of truth"])
  n19["Claim: Christianity satisfies all 20 axioms"]
  n20["Claim: Five alternative worldviews tested against constraints"]
  n21["Claim: Physical and spiritual laws share identical mathematical"]
  n22["Claim: Institutional entropy cycle is thermodynamically irreversible"]
  n23["Claim: Mathematics is man-made position formally closed by"]
  n24(["EvidenceBundle: Probability of worldviews satisfying constraints"])
  n25(["EvidenceBundle: Papers 1-3 derive requirements from foundations"])
  n26(["EvidenceBundle: PEAR-LAB 6.35σ, GCP 6σ, PROP-COSMOS 5.7σ"])
  n27(["EvidenceBundle: Developmental cognition: ANS, helper/helper"])
  n28>"Relationship: Axioms derive from information theory"
  n29>"Relationship: Christianity as fulfillment of axioms"
  n30>"Relationship: [[Master Equation]] variables and their roles"
  n31>"Relationship: [[Ten Laws]] physical-spiritual isomorphism"
  n0 --> n1
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n17 --> n18
n0 -.-> n2
n0 -.-> n3
n0 -.-> n4
n0 -.-> n5
n0 -.-> n6
n0 -.-> n19
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n0 -.-> n21
n0 -.-> n22
n0 -.-> n23
n2 -.-> n7
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n2 -.-> n9
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class n1 axiom
class n2 claim
class n3 claim
class n4 claim
class n5 claim
class n6 claim
class n7 evidence
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class n8 evidence  
class n9 evidence  
class n10 evidence  
class n13 relationship  
class n14 relationship  
class n15 relationship  
class n16 relationship  
class n17 axiom  
class n18 axiom  
class n19 claim  
class n20 claim  
class n21 claim  
class n22 claim  
class n23 claim  
class n24 evidence  
class n25 evidence  
class n26 evidence  
class n27 evidence  
class n28 relationship  
class n29 relationship  
class n30 relationship  
class n31 relationship

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## Appendix A: Complete Axiom Index

Level	Axiom	Statement
1: Existence	A1	Mathematical truths exist non-contingently
1: Existence	A2	Mathematical truths are temporally independent
1: Existence	A3	Mathematical truths are necessarily true
2: Properties	A4	Mathematical truth is universal (location-invariant)
2: Properties	A5	Mathematical truth is eternal (time-invariant)
2: Properties	A6	Mathematical truth is immaterial
2: Properties	A7	Mathematical truth is coherent
3: Origin	A8	Mathematical truth requires grounding
3: Origin	A9	The ground cannot be nothing
3: Origin	A10	The ground cannot be chaos
3: Origin	A11	The ground cannot be deceptive
4: Source	A12	The source of universal truth is universal
4: Source	A13	The source of eternal truth is eternal
4: Source	A14	The source of immaterial truth is immaterial
4: Source	A15	The source of coherent truth is coherent

Level	Axiom	Statement
5: Moral	A16	Truth is inherently valuable
5: Moral	A17	Deception is morally wrong
5: Moral	A18	Mathematical and moral truth share a common ground
6: Identity	A19	The ground is the Logos
6: Identity	A20	The Logos is functionally identical to God

![[LE\_14.png]]

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%%--- SEMANTIC TAGS ---%% %%tag::Axiom::bf12fe70-5d43-41ef-b91b-abeeeb53fb09::"Existence of Mathematical Truths":null%% %%tag::Axiom::351b68db-3bf-4010-b205-26483a7fb442::"Temporal Independence of Mathematical Truths":bf12fe70-5d43-41ef-b91b-abeeeb53fb09%% %%tag::Axiom::23b7f1cf-43c2-4d8c-b6fa-0478e62f863f::"Necessity of Mathematical Truths":bf12fe70-5d43-41ef-b91b-abeeeb53fb09%% %%tag::Axiom::0104952c-4b14-4fb2-bb44-3847fae0f2cc::"Universality of [[Mathematical Truth]]":null%% %%tag::Axiom::8dba6fod-4982-4bf5-95f3-beff2odbaod::"Eternality of [[Mathematical Truth]]":null%% %%tag::Axiom::d75b453f-bc45-4oda-8fdd-07e48e40cdc6::"Immateriality of [[Mathematical Truth]]":null%% %%tag::Axiom::60632dd4-62a0-422a-9377-3fa9ecd8bcef::"Coherence of [[Mathematical Truth]]":null%% %%tag::Axiom::03a10f73-4489-45b6-998f-bfb9d2f7e684::"[[Sufficient Reason]] for [[Mathematical Truth]]":null%% %%tag::Axiom::3d6371ef-4cad-4a1a-ba62-3575bbaad87c::"Not From Nothing":null%% %%tag::Axiom::71247320-e9b4-45d5-b9da-6753e3e7f707::"Not From Chaos":null%% %%tag::Axiom::6f7f3f48-01f7-4f42-bedf-493aea8cc17d::"Not From Deception":null%% %%tag::Axiom::ddbb8d7f-c4ed-410f-b331-f56f290d5ca6::"Source of Universal Truth is Universal":null%% %%tag::Axiom::264102b8-c89b-4eab-afbd-067895db19b9::"Source of Eternal Truth is Eternal":null%% %%tag::Axiom::cc54033d-52e5-4c66-ba17-8a55f34eb307::"Source of Immaterial Truth is Immaterial":null%% %%tag::Axiom::92802fc2-8461-4788-84b1-54a9235a3c32::"Source of Coherent Truth is Coherent":null%% %%tag::Axiom::aca06127-99b0-45b2-b5db-6b1ac077732e::"Truth as Value":null%% %%tag::Axiom::7a38637d-e6aa-4cad-83bf-57473b00b30f::"Deception

as Wrong":null%% %%tag::Axiom::2eed17c5-94b9-4d2a-83ab-cdfa92eb9445:"Mathematical-Moral Unity":null%% %%tag::Axiom::a19c4780-8c99-46d3-b84f-9dfbec8bebf:"The Logos":null%% %%tag::Axiom::1d41eb2d-714a-4984-a898-22b3991408ff:"The Identification of Logos with God":null%% %%tag::Claim::a659bb56-eda6-4dae-ac83-d1e9b56575d4:"Mathematical truth is grounded in a necessary source":null%% %%tag::Claim::3026c9d3-bbdd-4941-bf8d-75e4bb0e122f:"The source of mathematical truth possesses divine attributes":a659bb56-eda6-4dae-ac83-d1e9b56575d4%% %%tag::Claim::3a128d9b-69a7-4753-98fb-2da951987223:"Information theory contains built-in 'oughts'":null%% %%tag::EvidenceBundle::f62260cf-bd06-4bd5-bf06-6c626b00ec8d:"Landauer Confirmation":null%% %%tag::EvidenceBundle::125bob36-4a81-4bec-8cc7-15f1ed044802:"GCP data supporting coherence amplification":null%% %%tag::Relationship::7d4d816e-2600-41ca-a191-6dob169cdad3:"Axioms establish properties of mathematical truth":null%% %%tag::Relationship::bd4d42ba-a931-450b-b646-996e562f3cob:"Ground of mathematical truth is non-deceptive":null%% %%tag::Relationship::ac766279-6a26-4415-a4fo-80bo0886offb:"Mathematical truths are isomorphic to divine attributes":null%% %%--- END SEMANTIC TAGS ---%%