

# The Necessary Fall: Why One Rebellion Was Always Inevitable

A Theological & Philosophical Companion to *The Redemption Optimization*

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**Abstract.** This companion positions the classic “fall” (the first freely chosen rejection of the good) as the *minimal trigger* that grounds redemption-goods in actuality while preserving non-coercive freedom. Building on the event-valued evaluator introduced in *The Redemption Optimization* (TRO), we argue that: (i) if redemption-goods (mercy, justice-as-rectification) are valued as *events*, then a history with no counted rejection earns no redemption credit; (ii) with typical/concave credits and positive per-event costs, at most one gated rejection per class before structural closure maximizes the objective; (iii) the Biblical arc may be read coherently as *Permission*  $\rightarrow$  *Rectification*  $\rightarrow$  *Confirmation*, with the Cross as the maximal rectification event and history serving as non-coercive confirmation. We address standard objections (Mackie, Rowe, compatibilism/Molinism, and exegetical concerns), clarify that gratuitous repetitions are suboptimal (and thus to be *eliminated*), and provide a scriptural appendix mapping key loci to the framework. The aim is interpretive: to help theologians, philosophers, and systems practitioners read TRO’s results in the wider theodicy conversation.

## 1. Preface: What this paper is (and is not)

This is a *companion* to TRO, not a duplicate of its formal proofs. It translates TRO’s results into a theological-philosophical key and answers predictable objections. Where formalism is referenced, we keep it lightweight and defer to the TRO manuscript and replication pack (cf. <https://doi.org/10.5281/zenodo.17079985>).

## 2. Framing the paradox: Perfection, freedom, and the first refusal

Two intuitions collide:

- a) Perfect good should not *need* evil.
- b) Non-coercive freedom entails a *live* capacity to refuse.

TRO does not *valorize* evil; it distinguishes: (i) why at least one minimized refusal may be *permitted* to ground event-valued redemption, versus (ii) why repetition is strictly *suboptimal* once structural closure is available.

### 3. Event-valued grounding and minimal-trigger necessity

Let time index  $t \geq 0$ . TRO evaluates realized history by

$$J = \sum_{t \geq 0} (\alpha \Delta L_t + \gamma \Delta F_t + \mu M_t + \nu J_t^v) - \sum_{t \geq 0} (\beta H_t + \kappa R_t),$$

with guardrails: bounded cumulative harm and non-coercion (alternate possibilities remain live).

**Definition 1** (Counted rejection).  $R_t = 1$  iff (i) a rights/standards breach or harm beyond threshold occurs and (ii) culpability is adjudicated (accidents may inform learning but do not count as refusal).

**Claim 1** (Two-Branch Fork (TRO core)). If redemption-goods are event-valued ( $\mu + \nu > 0$ ) and honesty locks prohibit crediting near-misses, then along any history with  $\sum_t R_t = 0$  the cumulative redemption credit  $\sum_t (\mu M_t + \nu J_t^v) = 0$ . Hence a minimal realized refusal is *conditionally necessary* to ground redemption in actuality.

**Claim 2** (Minimal-trigger optimality (sketch)). Assume typical/concave kind-credits (first instance saturates the kind, later instances earn no new kind-level value) and  $\kappa > 0$ . Then, per class,  $n_c = 1$  maximizes  $J$  prior to confirmation;  $n_c > 1$  strictly lowers  $J$  (added costs, no new typical value).

*Implication.* Evil is not instrumentally valuable in general; the first counted refusal per class grounds redemptive *events*, after which the optimal policy is structural closure under non-coercion.

### 4. The “fall” as the cosmic minimal trigger

On a classical reading, the primal rebellion is the earliest  $R = 1$  in the moral order. TRO neither hinges on a single exegetical proof-text nor depends on “felix culpa”; it requires only that (i) a real refusal has occurred in the order of moral history, (ii) rectification be enacted, and (iii) repetition be eliminated by confirmation. The Cross functions as the maximal  $M/J^v$  event; it does not *license* further harm.

### 5. History as confirmation without coercion

TRO formalizes *confirmation* ( $S^*$ ) as structural hazard removal via a three-stage operator:

- (i) **Cohort replay:** reproduce prior causal routes and close them under like-for-like conditions;
- (ii) **Stress drills:** test under stronger incentives/loads;
- (iii) **Bounded monitored-live window:** a finite period of live operation with random checks; if no recurrences and freedoms remain live, flip  $S^* = 1$  for the class.

This removes the route (*not* the freedom), thereby securing good without coercion.

## 6. Objections and replies

### Mackie (logical problem)

Why didn't an omnipotent God actualize a rejection-free world with full value? *Reply:* If redemption-goods are event-valued, a rejection-free trajectory carries no redemption credit. The attempted alternative either (i) devalues redemption-goods to capacities (changing the evaluator) or (ii) collapses freedom to necessity.

### Rowe (gratuitous evil)

What about apparently pointless suffering (e.g., fawn in a forest fire)? *Reply:* TRO forbids farming harm: beyond the minimal trigger, repetitions are suboptimal and must be eliminated by policy/closure. The framework is prescriptive: it *condemns* gratuitous evils as performance failures to be driven to zero across finite classes.

### Compatibilism/Molinism

Could God secure freely-chosen good without refusal via middle knowledge? *Reply:* That alters the scoring rule to credit capacities or counterfactuals. TRO's event-valuation is an axiological stance, aligned with "by their fruits" evaluation; change the axiology and you change the question.

### Exegesis

Do Isaiah 14 and Ezekiel 28 literally teach an angelic fall? *Reply:* TRO does not rest on a single passage. It fits the canonical arc: the once-for-all sufficiency of Christ, repentance as enacted turning, and the call to "put away" works of darkness—i.e., to close routes, not excuse them.

## 7. Practical implications

**Personal:** live in confirmation mode—repent once, then close routes (habits, structures) that re-create the refusal.

**Institutional:** deploy event-ledgers, one-trigger dockets, and confirmation tests in safety-critical systems (healthcare, policing, AI).

**Public:** treat cycles of harm as evidence of unclosed routes; drive them to zero under non-coercion.

## 8. Conclusion

Under an event-valued axiology, a minimal refusal grounds redemption in actuality; repetition is dominated; confirmation secures good with freedom intact. TRO supplies the formalism and policy tools; this companion situates the result within theology and philosophy: count events, rectify rightly, prove closure, keep freedom live.

## Scriptural Appendix (select loci mapped to TRO)

- **Once-for-all rectification:** Heb. 9:26–28; 10:10–14 (“once for all”).
- **Event-valued faithfulness:** Jas. 2:14–18 (“by works is faith made complete”); Matt. 7:16–20 (“by their fruits”).
- **Close the route:** Rom. 13:12–14; Eph. 4:22–32; Col. 3:5–14 (put off/put on).
- **Mercy & justice as enacted:** Mic. 6:8; Matt. 5–7 (Sermon on the Mount).
- **Non-coercion and invitation:** Deut. 30:19; Matt. 23:37; Rev. 3:20.
- **Binding/loosing as structural authority:** Matt. 16:19; 18:18.
- **Completion/confirmation hope:** Rev. 21:3–5; 22:1–5.

## Definitions & notation (concise)

- $\Delta L_t$ : enacted protections;  $\Delta F_t$ : exercised freedoms.
- $M_t$ : mercy enacted;  $J_t^v$ : justice-as-rectification enacted.
- $H_t$ : harm;  $R_t$ : counted rejection (breach + culpability).
- $S^*$ : confirmation (hazard route closed with freedom live).
- Typal/concave credits: first instance saturates kind-level value.

**Data & materials.** Replication pack (figures, simulations, manuscript bundle): <https://doi.org/10.5281/zenodo.>

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