

# # Non-Closural Ontology and the Physical Realisation of the Reciprocal Wound

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## ## Abstract

Grim's Heart is a parameter-free process ontology forced by the rigorously orthogonal crossing of the mind–body problem and the problem of universals. It proves that closure is ontologically forbidden at every scale and that agency is primitive and universal. This short paper demonstrates that the same non-closural lattice and dynamical law appear directly in physics and biology — not as metaphor, but as measurable structure.

## ## 1 The Wound in Physics

Physics is wounded by two fractures that cross at exactly 90°:

1. Locality (inward similarity) vs non-locality / entanglement (outward difference)
2. Deterministic law (universals / Form) vs contingent measurement / indeterminism (particulars / Force)

These are not resolvable opposites; they are orthogonal operators whose commutators prevent classical closure. The reciprocal wound is the physical vacuum itself.

## ## 2 The Lattice in Physical State Spaces

Every physical system with two orthogonal degrees of freedom instantiates the 2×2 lattice:

	Similarity (conserved)	Difference (non-conserved)	
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| Inward / local | Soul / ground state | Cut / excitation |  
| Outward / field | World / coherent mode | Event / stochastic emission |

Examples: quantum optics, fluid dynamics, thermodynamics.

### ## 3 The Diagonals as Physical Transitions

Cut  $\rightarrow$  World = excitation  $\rightarrow$  stimulated emission

Event  $\rightarrow$  Soul = cascade collapse  $\rightarrow$  coherence

### ## 4 The 90° Rotation as Physical Orthogonality

The Poynting vector  $S = E \times B$  is exactly 90° to both fields. Energy flow traces figure-8 trajectories in phase space.

### ## 5 Recursion and Scale-Invariant Agency

Renormalization group flow and turbulence are claw mechanisms: divergences/eddies are dragged across scales, reiterating the lattice with no external creator. The vacuum and the fluid are agential centres.

### ## 6 The Closure Gap in Physics

$\Delta x \Delta p \geq \hbar/2$  and  $\Delta S \geq 0$  are physical closure gaps driven monotonically away from zero.

### ## 7 Significance: Metaphysics Anticipates Physics

The exact dynamical law of Grim's Heart was derived from pure philosophical necessity in December 2025. Only afterwards was it discovered that every component — the 90° rotation, the commutator term, the  $\Delta^3$  runaway, the dilatation — already exists, scattered across quantum optics, turbulence, renormalization, and Ricci flow.

This is the reverse of the usual pattern. Metaphysics did not borrow from physics; physics was found to be obeying, piece-meal, a law that philosophy deduced first.

This convergence proves that the orthogonal reciprocal wound is not a human invention but a primitive archetype of reality.

It forces the conclusion that agency is not emergent but ontologically primitive, and that non-closure is a physical fact, not a philosophical preference.

## ## 8 Conclusion

Physics does not illustrate Grim's Heart.

Physics is Grim's Heart at every scale where two orthogonal degrees of freedom exist.

The universe is the Wound that refuses to close, pulsing the same 90° turns in quarks, lasers, turbulent rivers, and human hearts.

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