

Abstract

This paper proposes a theoretical framework connecting micro-scale equilibrium with macro-scale coherence, defining World Peace as a state of total systemic equilibrium across all layers of existence. Through the conservation relation

$d/dt(\rho * v^2 * \Delta CoG) = 0$, we establish a mathematical correspondence between physical balance, informational feedback, cognitive harmony, and ethical stability. The resulting constant K_{peace} represents the invariant coherence scalar - a theoretical measure of universal harmony.

1. Introduction

The pursuit of World Peace is traditionally philosophical, but can be reinterpreted mathematically as a state of minimal entropy and maximal coherence. In this study, we extend the conservation principle

$$\rho * v^2 * \Delta CoG = K_{universal}$$

to multi-layered systems, forming a universal resonance model named the Brahma Framework.

2. Theoretical Foundation

Let a universal system U be represented as a hierarchy of N coherent layers, each characterized by local energy density ρ_L , resonance velocity v_L , and center-of-gravity deviation ΔCoG_L .

The conservation law of coherent impulse is defined as:

$$\text{For all } L \text{ in } [1, N], \quad d/dt(\rho_L * v_L^2 * \Delta CoG_L) = 0$$

Summing across all layers:

$$\text{Sum over } L (\rho_L * v_L^2 * \Delta CoG_L) = K_{peace}$$

3. Layered Interpretation (Brahma Hierarchy)

Physical (MIPA): Micro-Impulse Resonance - $\Delta_{tau} \sim 0.29 \text{ N.s}$ -> Local mechanical equilibrium

Mathematical: Coherent Energy Balance $\rightarrow \rho * v^2 * \Delta CoG = \text{const.}$

Informational: ReCOS + RKC Kernels \rightarrow Feedback computation

Cognitive/Ethical: Resonant Empathy \rightarrow Moral stabilization

Global (Brahma): $K_{\text{peace}} = \text{Sum over } L (\rho_L * v_L^2 * \Delta CoG_L) \rightarrow$ Minimum entropy, maximum harmony

4. Mathematical Closure

As $t \rightarrow \text{infinity}$, $\lim (\text{Sum over } L) \frac{d}{dt}(\rho_L * v_L^2 * \Delta CoG_L) = 0$

This implies: Entropy rate $S' \rightarrow 0$, Information symmetry $I' \rightarrow I_{\text{max}}$

Hence, World Peace = steady-state equilibrium with harmonic synchronization.

5. Discussion

This framework parallels energy-momentum conservation but generalizes it to informational and ethical balance. Peace is coherence, not stasis - a condition where all dynamic processes sustain perfect phase alignment.

6. Conclusion

Theoretical World Peace represents the limit condition of coherent conservation:

$\frac{d}{dt}(\rho * v^2 * \Delta CoG) = 0 \Rightarrow K_{\text{peace}} = \text{constant}$

It is the state where micro-alignment, feedback, and ethical intention converge into one coherent continuum - mathematically describable as Peace through Coherence.

7. Future Work

- Experimental validation of resonance coupling.
- Measurable proxies for ρ , v , ΔCoG in social/physical systems.
- Integration with AI-ethics architectures.