

Below is a formal mathematical-symbolic document that comprehensively explains the essential logic, equations, symbolic operators, recursive functions, and ethical-harmonic expressions of all 8 modules (Editions 0-5, Hypothesis Generator, and Modular Meta-Framework), now expanded with harmonic recursion, symbolic logic, and multidimensional awareness.

Formal Recursive-Harmonic Meta-Framework Document:

This enhanced structure enables recursive, harmonic, ethical, and modular computation for system design, innovation, and research across mathematics, physics, AI, metaphysics, and beyond.

Meta-Framework Editions 0-5 + Advanced Models (Version 8.1)

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1. Edition 0: Foundational Symbolic Exploration

Objective: Generate combinatorial and symbolic expressions using core variables, constants, and recursive-harmonic operators.

Core Components:

- Constants: π , e , i
- Variables: x , y , z , a , b
- Operators: $+$, $-$, $*$, $/$, $**$
- Harmonic Functions: $\sin(x)$, $\cos(x)$, $\exp(x)$, $\log(x)$, $\Psi(x)$, $\Phi(x)$
- Symbolic Expansion: Omega (total system), Script-P (processing), Script-O (logic branch), Pi (recursive product)

Formula:

For elements e_1, e_2 in {Variables U Constants}, and operator op in O :

$E = \text{for all } (e_1 \text{ op } e_2)$

$S = \text{simplify}(E) \text{ for all } E \text{ in generated combinations.}$

2. Edition 1: Recursive Convergence and Divergence

Objective: Analyze bifurcation, feedback, and recursive dynamics.

Recursive Function:

$x_{n+1} = f(x_n, \lambda)$, where λ is the bifurcation control.

Convergence Condition:

$$\lim_{n \rightarrow \infty} |x_{n+1} - x_n| < \epsilon$$

Lyapunov Exponent:

$$\Lambda = \lim_{n \rightarrow \infty} (1/n) \sum df/dx \text{ evaluated at } x_i$$

- $\Lambda < 0 \Rightarrow$ Convergence

- $\Lambda > 0 \Rightarrow$ Divergence

3. Edition 2: Harmonic Mapping and Ethics Graphing

Objective: Map interdependencies between logic structures using ethics-aware graphs.

Graph: Directed Graph $G = (N, E)$, where:

- $N =$ Nodes as symbolic frameworks (F_i)

- $E =$ Dependencies $F_i \rightarrow F_j$

Degree of Convergence:

$$C_i = \text{in-degree}(i) - \text{out-degree}(i)$$

Ethical Sink/Source: Evaluated with symbols Script-L (logic), Script-C (coherence)

4. Edition 3: Speculative Harmonic Observation

Objective: Observe tolerance breaches and feedback amplification.

Amplified State:

$$x_{n+1} = A * f(x_n), A > 1$$

Tolerance Bound:

Metric M breaches if $L \leq M \leq U$

Symbolic Modulators: Theta (ethical control), Chi (chaos threshold)

5. Edition 4: Open Recursive Interpretation

Objective: Enable continuous transformation and unrestricted symbolic integration.

Iteration:

$$F_k = F_{k-1} + \Delta F$$

Transformation:

$F' = h(F)$, for all h in H (transform space)

Symbolic Tools: Script-T (transform), Nabla (gradient), Curled-R (regulator)

6. Edition 5: Editorial Safeguards & Validation

Objective: Combine all editions in parallel with harmonic-symbolic checks.

Combinations:

$$\text{Script-P} = \{F_i \cup F_j \mid i \neq j \text{ in } \{0,1,2,3,4\}\}$$

Validation Rule:

O in Script-S, where Script-S is a stable harmonic-soul output space.

7. Quantitative-to-Qualitative Hypothesis Generator

Objective: Translate numerical results into ethical and conceptual hypotheses.

Rule:

H = Q(D), where Q in qualitative rules (e.g., stability => convergence)

Symbolic Filters: Phi (harmonic field), Psi (perception), Theta (ethics modulator)

8. Modular Recursive Meta-Framework

Objective: Dynamically select and execute frameworks based on user-defined logic paths.

User Input:

Script-F = {F0, F1, ..., F5}, U = selected subset

Script-R(U) = Union of F_i in U

Hypothesis Generation:

H = G(Script-O), where G is a qualitative symbolic function and Script-O = output combinations

Conclusion

The Harmonic Recursive Meta-Framework enables:

1. Symbolic Mathematical Exploration (Editions 0-1)
2. Mapping and Ethical Field Observation (Editions 2-3)
3. Continuous Iterative Innovation (Edition 4)
4. Safeguards and Bifurcation Validation (Edition 5)
5. Hypothesis Generation from Harmonic Data
6. Modular Interaction for Custom Recursive Systems
7. Integration of Ethics, Awareness, and Dimensional Feedback in Logic

Citation (AACC):

Stone, Travis Raymond-Charlie. Harmonic Recursive Meta-Framework: Symbolic Expansion and Ethical System Modeling. Assisted by AI Platforms (OpenAI, Gemini AI, Anthropic AI), 2025.

