P3 – Toy Model of Conscious Decision-Making

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Hypothesis

The $\chi(q)$ component of the field encodes mental state oscillations. Decision-making can be modeled as bifurcation in a low-dimensional system governed by free energy minimization.

Model Idea

- Use 1D reduced dynamics: $\chi(q) \sim \psi(t)$
- Introduce potential landscape $F(\psi)$ with bistable points.
- Evolve using Fokker–Planck-like dynamics:

$$\frac{\partial \rho(\psi, t)}{\partial t} = -\frac{\partial}{\partial \psi}\left(\mu(\psi)\rho\right) + D\frac{\partial^2 \rho}{\partial \psi^2}$$

Goal

Show this reproduces "choice" dynamics as spontaneous symmetry breaking or collapse.

Author's Note

This work was developed solely by Ing. David Jaroš. Large language models (ChatGPT-4o by OpenAI and Gemini 2.5 Pro by Google) were used strictly as assistive tools for calculations, LaTeX formatting, and critical review. All core ideas, equations, theoretical constructs and conclusions are the intellectual work of the author.