

# 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:

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

## Goal

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