Diagram: Non-Commuting Region and Horizon

This diagram depicts a configurational category $\mathcal{C}$ with a distinguished full subcategory $\mathcal{R} \subseteq \mathcal{C}$.

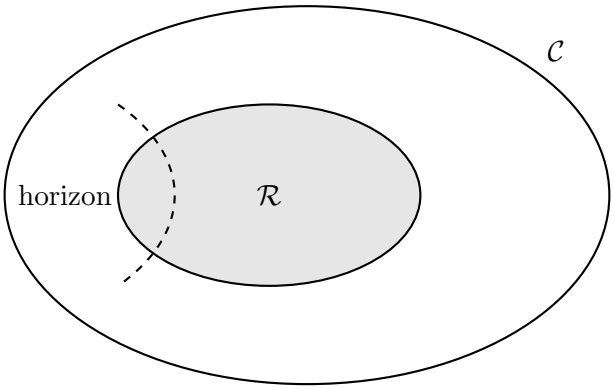
Objects in $\mathcal{R}$. For all $X \in \mathcal{R}$, the natural transformation

$$\eta_X : \Pi(SX) \longrightarrow S_{\mathcal{O}}(\Pi X)$$

is not an isomorphism. Stabilization and observation fail to commute.

Objects in $\mathcal{C} \setminus \mathcal{R}$. For these objects, η_X is an isomorphism. Commutation holds.

The horizon is the boundary between these two domains.



The shaded region represents persistent non-commutation. The dashed curve indicates the commutation boundary (horizon). The definition is structural and does not rely on geometric or causal data.