

Title: General Probability theories: from classical to quantum

Date: Jun 24, 2015 04:00 PM

URL: <http://pirsa.org/15060037>

Abstract:

GR

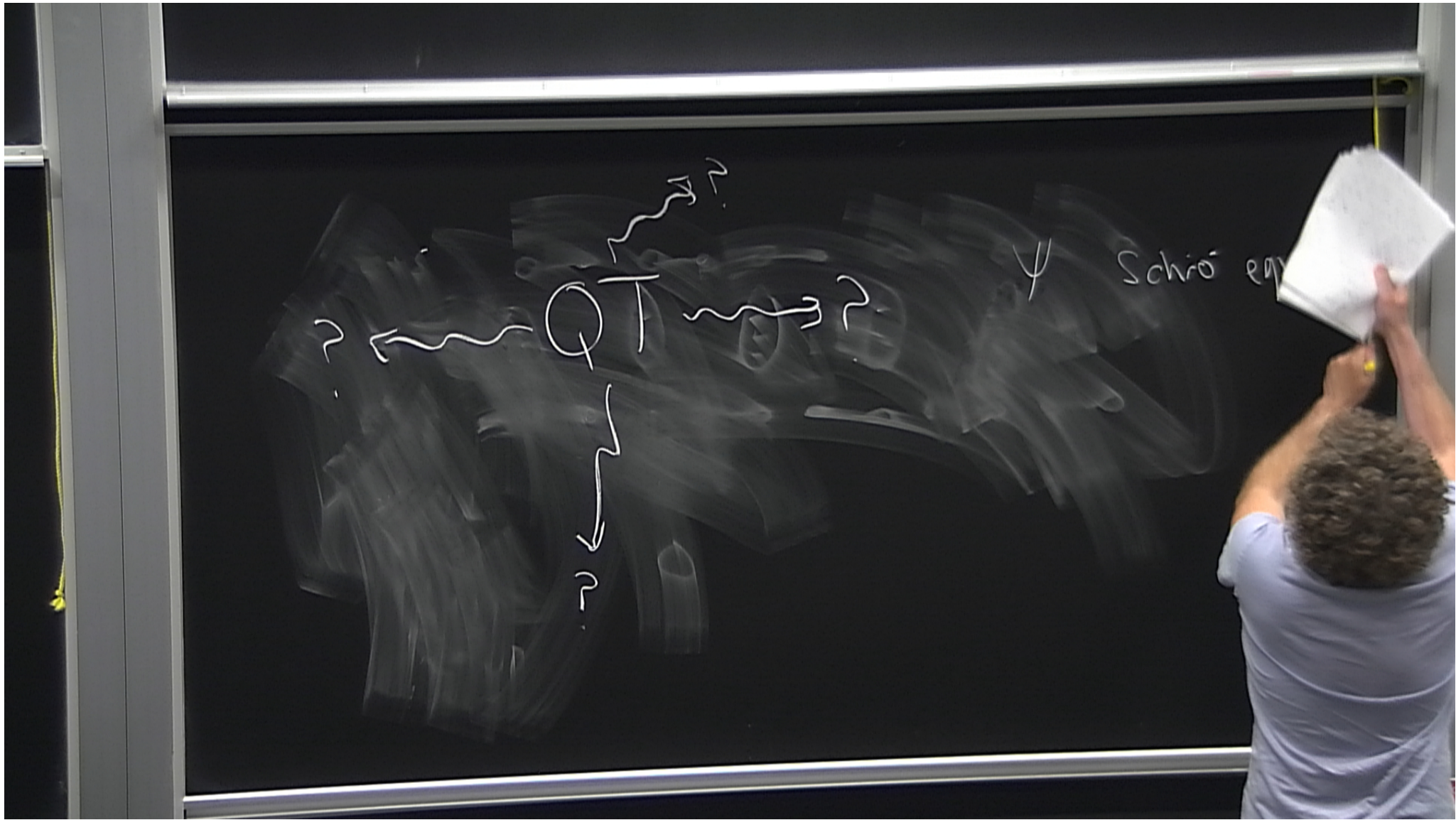
$g_{\mu\nu}$  is dynamical  $\Rightarrow$  c.s. is dynamical.

in QT

dynamical quantities subject to  
superposition. "no-matter-of-the-factness"

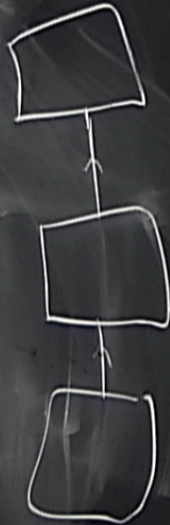








GPT's.



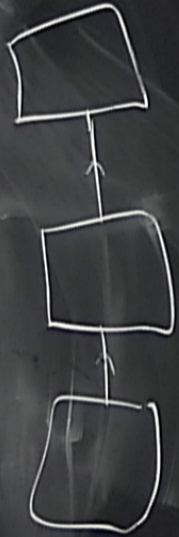
$$P = \begin{pmatrix} P_1 \\ P_2 \\ \vdots \\ P_k \end{pmatrix}$$

$$\hat{P} = \begin{pmatrix} P_{2+} & a \\ a^* & P_2 \end{pmatrix} \iff P = \begin{pmatrix} P_{2+} \\ P_2 \\ P_{2+} \\ P_{2+} \end{pmatrix}$$

$$\text{prob} = \text{tr} \left( \begin{matrix} \hat{P} & \hat{P} \\ \downarrow & \uparrow \\ 1 & P \end{matrix} \right)$$



GPT's.



$$P = \begin{pmatrix} P_1 \\ P_2 \\ \vdots \\ P_k \end{pmatrix}$$

$$\hat{P} = \begin{pmatrix} P_{2+} & a \\ a^* & P_2 \end{pmatrix}$$

$$\Leftrightarrow P = \begin{pmatrix} P_{2+} \\ P_2 \\ P_{2+} \\ P_{2+} \end{pmatrix}$$

$$\text{prob} = \text{tr}(\hat{P} \hat{P})$$

$$= \begin{matrix} \downarrow & \uparrow \\ \cdot & \cdot \\ \uparrow & \uparrow \\ \cdot & \cdot \end{matrix}$$

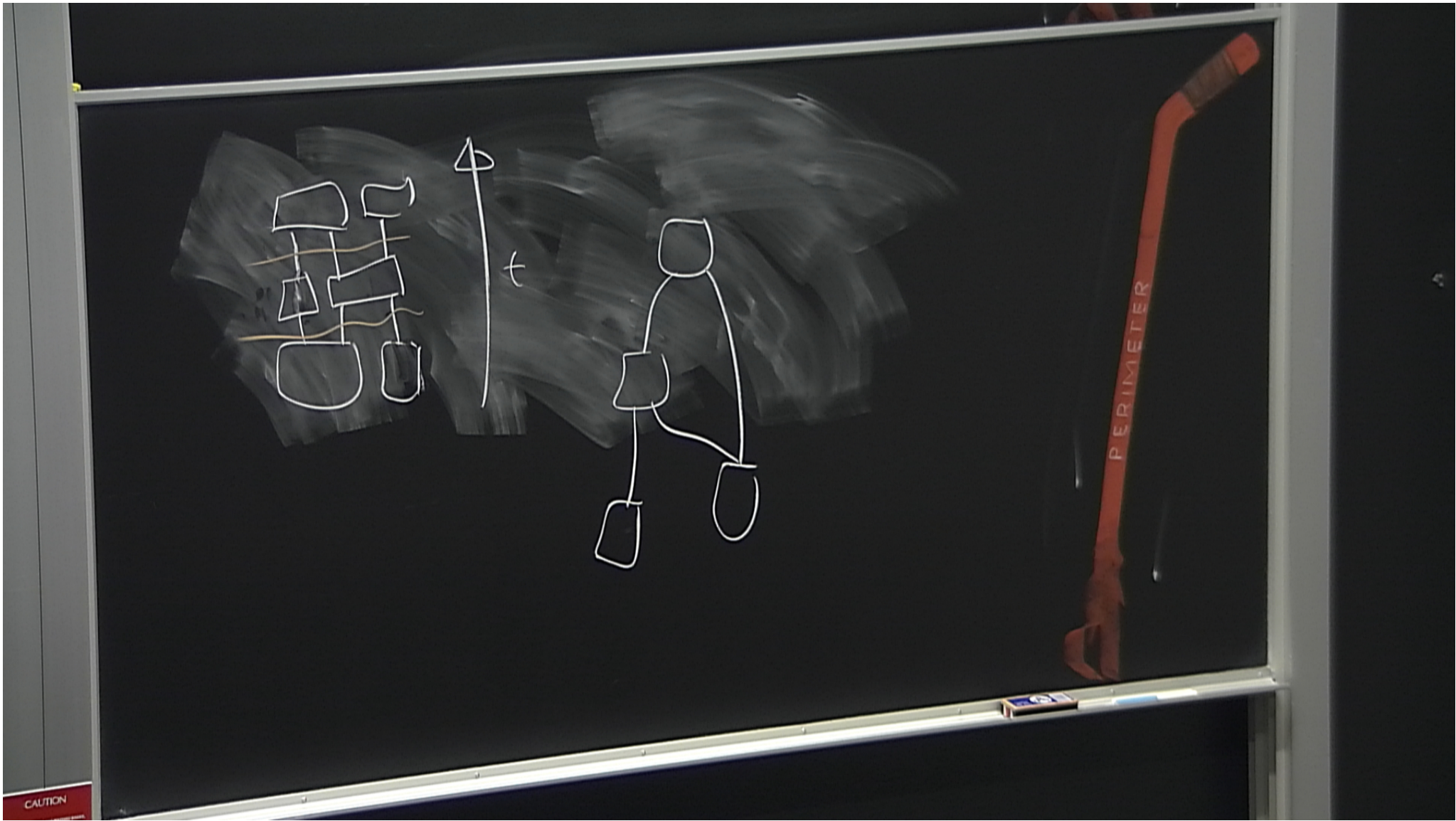
$$P \in S$$

$$\Gamma \in R$$

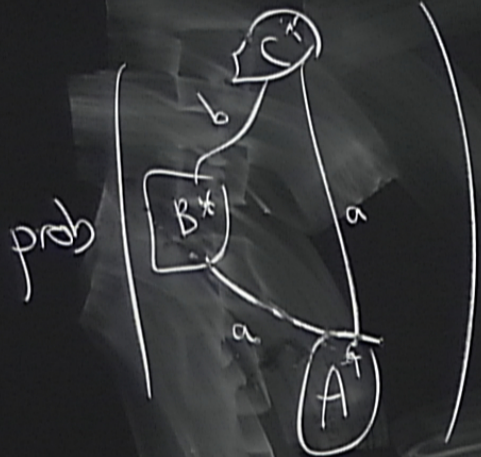
$$P \rightarrow ZP$$

$$Z \in T$$

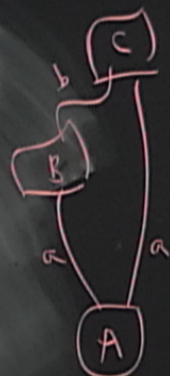








=



$$\text{prob}(A_{a_1 a_2} B_{a_1} C_{b_3 a_2}) =$$

tomographic locality  
(true in QT, (Prob 1))



probs

Operational  
description

