$$
\begin{array}{c}
\mathbb{1} \\
\varrho \big\downarrow \big\uparrow b \\
\mathbb{1}^{\sharp} \\
\triangle_{0}^{\infty}\mathbb{C}
\end{array}
$$

$$\mathbb{1} \in \triangle_{0}^{\omega}\mathbb{C} \text{ abel } C^{*} \text{ alg}$$

$$
\begin{array}{c}
\mathbb{1} \\
\varrho \big\downarrow \big\uparrow b \\
\mathbb{1}^{\sharp} \\
\triangle_{0}\mathbb{C}
\end{array}
$$

$$\mathbb{1} \in \triangle_{0}^{\omega}\mathbb{C} \text{ abel unit } C^{*} \text{ alg}$$

$$\mathbb{T}\,\mathbb{T}^{*} = \mathbb{T}^{*}\,\mathbb{T} \text{ normal } \Longrightarrow |\mathbb{T}|_{\sigma} = \lim \overline{\mathbb{T}^{n}}^{1/n} = \overline{\mathbb{T}}$$

$$\mathbb{1}^{*} = \mathbb{1} \Longrightarrow \overline{\mathbb{1}^{2^{n}}} = \overline{\mathbb{1}^{2^{n-1}}\,\mathbb{1}^{2^{n-1}}} = \overline{\mathbb{1}^{2^{n-1}}}^{2} = \cdots = \overline{\mathbb{1}}^{2^{n}}$$

$$\Longrightarrow \overline{\mathbb{T}^{2^{n}}}^{2} = \overline{\mathbb{T}^{*2^{n}}\,\mathbb{T}^{2^{n}}} = \overline{(\mathbb{T}^{*}\,\mathbb{T})^{2^{n}}} = \overline{(\mathbb{T}^{*}\,\mathbb{T})}^{2^{n}} = \overline{\mathbb{T}}^{2^{n+1}}$$

$$\Longrightarrow \overline{\mathbb{T}^{2^{n}}} = \overline{\mathbb{T}}^{2^{n}} \Longrightarrow \overline{\mathbb{T}} = \overline{\mathbb{T}^{2^{n}}}^{2^{-n}} \rightsquigarrow |\mathbb{T}|_{\sigma}$$

$${}^{\varrho}\mathbb{T} = {}^{\mathbb{1}^{\sharp}}\!\!\triangle\mathbb{T} \in \mathbb{1}^{\sharp}\,\triangle_{0}^{\infty}\mathbb{C} \text{ contr hom}$$

$$\mathbb{1} \text{ unit } \mathbb{T} = \mathbb{1} + i\,\acute{\mathbb{1}} \Longrightarrow \bigwedge_{\mathbb{L} \in \mathbb{1}^{\sharp}} \mathbb{L}\,\dot{\mathbb{1}} = {}^{\mathbb{L}}\dot{\mathbb{1}} \in {}^{\mathbb{1}^{\sharp}}\dot{\mathbb{1}} = \mathbb{1}^{\sharp}_{\dot{\mathbb{1}}} \subset \mathbb{R}$$

$$\Rightarrow \left({}^{\mathbb{L}}\mathbb{1}\right)^* = \overbrace{{}^{\mathbb{L}}\mathbb{1} + i\,{}^{\mathbb{L}}\mathbb{1}'}^{*} = {}^{\mathbb{L}}\mathbb{1} - i\,{}^{\mathbb{L}}\mathbb{1}' = {}^{\mathbb{L}}\overbrace{\mathbb{1} - i\mathbb{1}'} = {}^{\mathbb{L}}\mathbb{1}^* \Rightarrow \varrho * \text{ hom}$$

$$^{\infty}\overline{\hat{\mathbb{1}}}^2 = \bigvee [\,\mathbb{1}^\sharp\,]\,\hat{\mathbb{1}}^*\,\hat{\mathbb{1}} = \bigvee \mathbb{1}^\sharp\,\hat{\mathbb{1}}^*\mathbb{1} = \bigvee \mathbb{1}^\sharp_{\hat{\mathbb{1}}^*\mathbb{1}} = |\mathbb{1}^*\mathbb{1}|_\sigma = \overline{\mathbb{1}^*\mathbb{1}} = \overline{\mathbb{1}}^2 \Rightarrow \varrho \text{ monometric}$$

$$\mathbb{1} \text{ unit } \Rightarrow \text{ voll } {}^{\varrho}\mathbb{1} \overset{\text{abg}}{\sqsubset} {}^{\mathbb{1}^\sharp}\triangle_0\mathbb{C} \underset{\text{SW}}{\Rightarrow} {}^{\varrho}\mathbb{1} = {}^{\mathbb{1}^\sharp}\triangle_0\mathbb{C}$$

$$\begin{array}{ccc} \mathbb{1} & \xrightarrow{a} & \mathbb{1}\times\mathbb{C} \\ \downarrow b & & \downarrow s \\ {}^{\overset{\sharp}{\mathbb{1}}}\triangle_0^\omega\mathbb{C} & \xrightarrow{q} & {}^{\mathbb{1}\overset{\sharp}{\times}\mathbb{C}}\triangle_0\mathbb{C} = {}^{\overset{\sharp}{\mathbb{1}}}\triangle_0^\omega\mathbb{C}\times\mathbb{C} \end{array}$$

$$\mathbb{1} \in \triangledown_0^n\mathbb{C} \text{ voll abel non-unit } C^* \text{ alg } \Rightarrow \mathbb{1}\times\mathbb{C} \in \triangledown_0^n\mathbb{C} \text{ voll abel unit } C^* \text{ alg}$$

$$\text{non-unit } \mathbb{1} \ni \mathbb{1} \Rightarrow \hat{\mathbb{1}} \in {}^{\overset{\sharp}{\mathbb{1}}}\triangle_0^\omega\mathbb{C}$$

$$\bigwedge_{\varepsilon>0} \mathbb{1}\overset{\sharp}{\times}\mathbb{C} \supset \frac{\mathbb{k} \in \mathbb{1}\overset{\sharp}{\times}\mathbb{C}}{\overline{\mathbb{k}\,\underbrace{\mathbb{1}{:}0}}\geqslant\varepsilon} \not\ni \infty \underset{\overset{\sharp}{i}\text{ homeo}}{\Rightarrow} K := \left\{\begin{array}{c}\mathbb{L} \in \overset{\sharp}{\mathbb{1}} \\ \overline{\mathbb{L}\mathbb{1}} \geqslant \varepsilon\end{array}\right\} \text{ cpt}$$

$$\bigwedge_{\mathbb{L} \in \overset{\sharp}{\mathbb{1}} \llcorner K} \overline{{}^{\mathbb{L}}\hat{\mathbb{1}}} = \overline{\mathbb{L}\mathbb{1}} < \varepsilon$$

$$\text{non-unit } \mathbb{1} \ni \mathbb{1} \Rightarrow {}^{\overset{\sharp}{\hat{\mathbb{1}}}}\mathbb{1} \cup 0 = \overset{\sharp}{\mathbb{1}}|\,\mathbb{1} \cup 0$$

$$\hbar \in \triangle_0^\omega \text{ lic cpt non-cpt } {}^{\hbar}\triangle_0^\omega\mathbb{K} \sqsupset \mathbb{1} \text{ hull } \Leftrightarrow (1) \bigwedge_{h \neq h'} \bigvee_{\mathbb{1} \in \mathbb{1}} {}^{h}\mathbb{1} \neq {}^{h'}\mathbb{1}\ (2) \bigwedge_{h \in \hbar} \bigvee_{\mathbb{1} \in \mathbb{1}} {}^{h}\mathbb{1} \neq 0$$

$$\mathbb{1}\times\mathbb{K} \sqsubset \underbrace{{}^{\hbar}\triangle_0^\omega\mathbb{K}}\times\mathbb{K} = {}^{\hbar\,\cup\,\infty}\triangle_0\mathbb{K}$$

$$h \neq h' \text{ in } \hbar \cup \infty$$

$$\begin{cases} \dot{h} \in \hbar & \Rightarrow \bigvee_{\mathbb{1} \in \mathbb{1}} {}^{h}\mathbb{1} \neq {}^{h'}\mathbb{1} \Rightarrow (\mathbb{1}{:}0) \in \mathbb{1}\times\mathbb{K} \wedge {}^{h}\overbrace{\mathbb{1}{:}0} = {}^{h}\mathbb{1} \neq {}^{h'}\mathbb{1} = {}^{h'}\overbrace{\mathbb{1}{:}0} \\ h' = \infty & \Rightarrow \bigvee_{\mathbb{1} \in \mathbb{1}} {}^{h}\mathbb{1} \neq 0 \Rightarrow {}^{h}\overbrace{\mathbb{1}{:}0} = {}^{h}\mathbb{1} \neq 0 = {}^{\infty}\overbrace{\mathbb{1}{:}0} \end{cases}$$

$$\Rightarrow \mathbb{I}\times\mathbb{K}^{\hbar\cup\infty}\text{treu} \underset{\text{SW}}{\Rightarrow} \mathbb{I}\times\mathbb{K} \underset{\text{hull}}{\sqsubset} \left({}^{\hbar}\overset{\omega}{\underset{0}{\triangle}}\mathbb{K}\right)\times\mathbb{K}$$

$$\Rightarrow \bigwedge \gimel \in {}^{\hbar}\overset{\omega}{\underset{0}{\triangle}}\mathbb{K} \bigvee \mathbb{I}\times\mathbb{K} \ni (\mathbb{T}_n{:}a_n) \underset{\hbar\cup\infty}{\overset{\text{glm}}{\rightsquigarrow}} (\gimel{:}0) \Rightarrow a_n = {}^{\infty}\overbrace{\mathbb{T}_n\hat{:}a_n} \rightsquigarrow {}^{\infty}\overbrace{\gimel{:}0} = 0$$

$$\bigwedge_{\mathfrak{h}\in\hbar} {}^{\mathfrak{h}}\mathbb{T}_n + \begin{bmatrix} a_n \\ 2 \end{bmatrix} (\rightsquigarrow 0) = {}^{\mathfrak{h}}\overbrace{\mathbb{T}_n{:}a_n} \underset{\text{glm}}{\rightsquigarrow} {}^{\mathfrak{h}}\overbrace{\gimel{:}0} = {}^{\mathfrak{h}}\gimel \Rightarrow \mathbb{T}_n \underset{\hbar}{\overset{\text{glm}}{\rightsquigarrow}} \gimel$$

$$\mathbb{I} \text{ non-unit abel } C^* \text{ alg } \Rightarrow \varrho \text{ monometric } C^* \text{ hom } \Rightarrow \varrho\mathbb{I} \text{ voll } \Rightarrow \varrho\mathbb{I} \overset{\text{abg}}{\blacktriangledown} {}^{\mathbb{I}^\sharp}\overset{\omega}{\underset{0}{\triangle}}\mathbb{C}$$

$$\bigwedge_{\mathbb{L}\in\mathbb{I}^\sharp} \bigvee_{\mathbb{T}\in\mathbb{I}} \mathbb{L}\mathbb{T} \neq 0 \Rightarrow \varrho\mathbb{I}^{\mathbb{I}^\sharp\cup 0}\text{treu} \underset{\text{SW}}{\Rightarrow} \varrho\mathbb{I} = {}^{\mathbb{I}^\sharp}\overset{\omega}{\underset{0}{\triangle}}\mathbb{C}$$

$$\mathbb{I} \text{ non unit } \Rightarrow \text{ voll } {}^{\varrho}\mathbb{I} \overset{\text{abg}}{\sqsubset} {}^{\mathbb{I}^\sharp}\overset{\omega}{\underset{0}{\triangle}}\mathbb{C} \underset{\text{SW}}{\Rightarrow} {}^{\varrho}\mathbb{I} = {}^{\mathbb{I}^\sharp}\overset{\omega}{\underset{0}{\triangle}}\mathbb{C}$$