

$$\begin{array}{ccc}
\mathbb{C}|\mathbb{1} & \cong & \mathbb{1} \\
\downarrow \text{exp} & & \downarrow \\
\mathbb{C}|\mathbb{1} \triangleleft \mathbb{R} & \cong & \text{exp } t \mathbb{1}
\end{array}$$

$$\mathbb{C}|\mathbb{1} = \frac{\mathbb{1} \xleftarrow{\mathbb{1}} \mathcal{D}_{\mathbb{1}} \xrightarrow{\text{hull}} \mathbb{1}}{\bigwedge_{0 \neq n} \mathbb{1}_n := \overline{I - \mathbb{1}/n} \in \mathcal{U}|\mathbb{1} \text{ bes : } \bigwedge_{1 \leq m} \overline{\mathbb{1}_n^m} = \overline{I - \mathbb{1}/n} \leq C \text{ equi-bes}}$$

$$0 \leq t \xrightarrow[\text{s-stet}]{\text{s-group}} \mathbb{1}^{xt} \xrightarrow[n \xrightarrow{\sim} \infty]{} t_e \mathbb{1} \overline{I - \mathbb{1}/n}$$

$$\begin{aligned}
& \overline{\mathbb{1}^t \mathbb{1}^{-t} \mathbb{1} - t_e \mathbb{1} \overline{I - \mathbb{1}/n} - t_e \mathbb{1} \overline{I + \mathbb{1}/n}} \leq \\
& \overline{\mathbb{1}^t - t_e \mathbb{1} \overline{I - \mathbb{1}/n}} \mathbb{1}^{-t} \mathbb{1} + \overline{t_e \mathbb{1} \overline{I - \mathbb{1}/n}} \overline{\mathbb{1}^{-t} - t_e \mathbb{1} \overline{I + \mathbb{1}/n}} \xrightarrow{\sim} 0 \\
& \Rightarrow \overline{\mathbb{1}^t \mathbb{1}^{-t} \mathbb{1}} \in \overline{t_e \mathbb{1} \overline{I - \mathbb{1}/n} - t_e \mathbb{1} \overline{I + \mathbb{1}/n}} \\
& \Rightarrow \overline{\mathbb{1}^t \mathbb{1}^{-t} \mathbb{1}} \xrightarrow{\sim} \overline{t_e \mathbb{1} \overline{I - \mathbb{1}/n} - t_e \mathbb{1} \overline{I + \mathbb{1}/n}} \leq \overline{t_e \mathbb{1} \overline{I - \mathbb{1}/n} - t_e \mathbb{1} \overline{I + \mathbb{1}/n}} \leq C^2 \mathbb{1}
\end{aligned}$$

$$\underbrace{\mathcal{V}^s \mathcal{V}^{-s}} \underbrace{\mathcal{V}^t \mathcal{V}^{-t}} = \mathcal{V}^{s+t} \mathcal{V}^{-(s+t)} \quad \text{s-stet s-group}$$

$$\begin{aligned} \mathcal{L} \overbrace{\mathcal{I}^{-\mathcal{L}/m}^{-1}} \mathcal{L} \overbrace{\mathcal{I}^{+\mathcal{L}/n}^{-1}} &= \mathcal{L} \overbrace{\mathcal{I}^{+\mathcal{L}/n}^{-1}} \mathcal{L} \overbrace{\mathcal{I}^{-\mathcal{L}/m}^{-1}} \\ \Rightarrow s \mathbf{e} \mathcal{L} \overbrace{\mathcal{I}^{-\mathcal{L}/m}^{-1}} - t \mathbf{e} \mathcal{L} \overbrace{\mathcal{I}^{+\mathcal{L}/n}^{-1}} &= -t \mathbf{e} \mathcal{L} \overbrace{\mathcal{I}^{+\mathcal{L}/n}^{-1}} s \mathbf{e} \mathcal{L} \overbrace{\mathcal{I}^{-\mathcal{L}/m}^{-1}} \\ \Rightarrow \underbrace{\mathcal{V}^s \mathcal{V}^{-s}} \underbrace{\mathcal{V}^t \mathcal{V}^{-t}} &\rightsquigarrow \underbrace{s \mathbf{e} \mathcal{L} \overbrace{\mathcal{I}^{-\mathcal{L}/n}^{-1}} - s \mathbf{e} \mathcal{L} \overbrace{\mathcal{I}^{+\mathcal{L}/n}^{-1}}} \\ \underbrace{t \mathbf{e} \mathcal{L} \overbrace{\mathcal{I}^{-\mathcal{L}/n}^{-1}} - t \mathbf{e} \mathcal{L} \overbrace{\mathcal{I}^{+\mathcal{L}/n}^{-1}}} &= \underbrace{s \mathbf{e} \mathcal{L} \overbrace{\mathcal{I}^{-\mathcal{L}/n}^{-1}} - t \mathbf{e} \mathcal{L} \overbrace{\mathcal{I}^{-\mathcal{L}/n}^{-1}}} \underbrace{- s \mathbf{e} \mathcal{L} \overbrace{\mathcal{I}^{+\mathcal{L}/n}^{-1}} - t \mathbf{e} \mathcal{L} \overbrace{\mathcal{I}^{+\mathcal{L}/n}^{-1}}} \\ &= s+t \mathbf{e} \mathcal{L} \overbrace{\mathcal{I}^{-\mathcal{L}/n}^{-1}} - s-t \mathbf{e} \mathcal{L} \overbrace{\mathcal{I}^{+\mathcal{L}/n}^{-1}} \rightsquigarrow \mathcal{V}^{s+t} \mathcal{V}^{-(s+t)} \end{aligned}$$

$$\text{ex } \lim_{\varepsilon \rightarrow 0} \frac{\mathcal{V}^\varepsilon \mathcal{V}^{-\varepsilon} \mathcal{1} - \mathcal{1}}{\varepsilon} = : \underline{\mathcal{V}} \mathcal{1}$$

$$\begin{cases} \mathcal{D}_{\mathcal{L}} \sqsubset \mathcal{D}_{\underline{\mathcal{V}}} \\ \underline{\mathcal{V}} | \mathcal{D}_{\mathcal{L}} = 0 \end{cases}$$

$$\mathcal{1} \in \mathcal{D}_{\mathcal{L}} = \mathcal{D}_{-\mathcal{L}} \Rightarrow \frac{\mathcal{V}^\varepsilon \mathcal{V}^{-\varepsilon} \mathcal{1} - \mathcal{1}}{\varepsilon} = \mathcal{V}^\varepsilon \frac{\mathcal{V}^{-\varepsilon} \mathcal{1} - \mathcal{1}}{\varepsilon} + \frac{\mathcal{V}^\varepsilon \mathcal{1} - \mathcal{1}}{\varepsilon} \rightsquigarrow \mathcal{V}^0 \underbrace{-\mathcal{L} \mathcal{1}} + \mathcal{L} \mathcal{1} = 0 \Rightarrow \begin{cases} \mathcal{1} \in \mathcal{D}_{\underline{\mathcal{V}}} \\ \underline{\mathcal{V}} \mathcal{1} = 0 \end{cases}$$

$$\bigwedge_{0 \leq t} \mathcal{V}^t \mathcal{V}^{-t} = I$$

$$\mathcal{V}^{-t} = \overbrace{\mathcal{V}^t}^{-1}$$

$$\begin{aligned} \bigwedge_{\mathcal{1} \in \mathcal{D}_{\mathcal{L}}} \partial_t \mathcal{V}^t \mathcal{V}^{-t} \mathcal{1} &= \partial_t \mathcal{V} \underbrace{\mathcal{V}^{-t} \mathcal{1}} + \mathcal{V}^t \underbrace{\partial_t \mathcal{V}^{-t} \mathcal{1}} \\ &= \mathcal{V}^t \mathcal{L} \underbrace{\mathcal{V}^{-t} \mathcal{1}} + \mathcal{V}^t \underbrace{-\mathcal{L} \mathcal{V}^{-t} \mathcal{1}} = \mathcal{V}^t (\mathcal{L} - \mathcal{L}) \mathcal{V}^{-t} \mathcal{1} = 0 \Rightarrow \mathcal{V}^t \mathcal{V}^{-t} \mathcal{1} = \mathcal{1} \xrightarrow{\mathcal{D}_{\mathcal{L}} \stackrel{\sqsubset}{=} \mathcal{1}} \mathcal{V}^t \mathcal{V}^{-t} = I \end{aligned}$$

$$\mathbb{R} \ni t \xrightarrow{\text{s-stet group}} \mathcal{V}^t$$

$$\bigwedge_{s:t}^{\mathbb{R}} \mathcal{V}^{s+t} = \mathcal{V}^s \mathcal{V}^t$$