$$\circ\mathbb{T}_{\mathbb{C}} \searrow_{\infty} \mathbb{C}$$

$$\lceil() \,/\, \lceil()^{\tau} \,/\, \lceil()^{\sigma} \;\Big\downarrow\; \text{allg / Toep / Weyl}$$

$$\mho| \circ\mathbb{T}_{\mathbb{C}} \searrow^{2}_{\omega} \check{\mathbb{C}}$$

$$\text{gen field} \;/\; \qquad \lceil\zeta = \overline{\zeta{:}\bar{\zeta}} \in \mho| \circ\mathbb{T}_{\mathbb{C}} \searrow^{2}_{\omega} \check{\mathbb{C}} \text{ self-adj}$$

$$\lceil J = \lceil\zeta \int_{\mu^0_\zeta}^{\circ\mathbb{T}_{\mathbb{C}}} {}_{\zeta} J \in \mho| \circ\mathbb{T}_{\mathbb{C}} \searrow^{2}_{\omega} \check{\mathbb{C}}$$

$$\overset{*}{\lceil J} = \lceil \overset{*}{J}$$

$$\mho_{\omega} | \left(\circ\mathbb{T}_{\mathbb{C}}\right) \ni \imath \underset{\text{covariance}}{\Longrightarrow} \begin{cases} \imath^{\nu} \lceil\zeta\, \imath^{-\nu} & = \lceil {}^{\zeta}\imath^{-1} \\ \imath\imath^{\nu} \lceil\jmath\, \imath^{-\nu} & = \lceil \imath \ltimes \jmath \end{cases}$$

$$\overline{\lceil\zeta\; \circ\mathbb{T}_{\mathbb{C}}w^{-\nu}}^{z} = \overbrace{\lceil\zeta\; \circ\mathbb{T}_{\mathbb{C}}z^{-\nu}}^{w}$$

$$\text{LHS} = \overline{\circ\mathbb{T}_{\mathbb{C}}z^{-\nu} \bigstar \underbrace{\lceil\zeta\; \circ\mathbb{T}_{\mathbb{C}}w^{-\nu}}} = \underbrace{\lceil\zeta\; \circ\mathbb{T}_{\mathbb{C}}w^{-\nu}} \bigstar \circ\mathbb{T}_{\mathbb{C}}z^{-\nu} \underset{\text{sa}}{=} \circ\mathbb{T}_{\mathbb{C}}w^{-\nu} \bigstar \underbrace{\lceil\zeta\; \circ\mathbb{T}_{\mathbb{C}}z^{-\nu}} = \text{RHS}$$

$$\lceil\overset{\tau}{\zeta{:}\bar{\zeta}} = \lceil\overset{\tau}{\zeta}\, \lceil\overset{\tau}{\zeta}{}^{*} \text{ Toep}$$

$$\mho_{\omega} | \circ\mathbb{T}_{\mathbb{C}} \ni \imath \underset{\text{covariance}}{\Longrightarrow} \imath^{\nu}\, \lceil\zeta\, \imath^{-\nu} = \lceil {}^{\zeta}\imath^{-1}$$

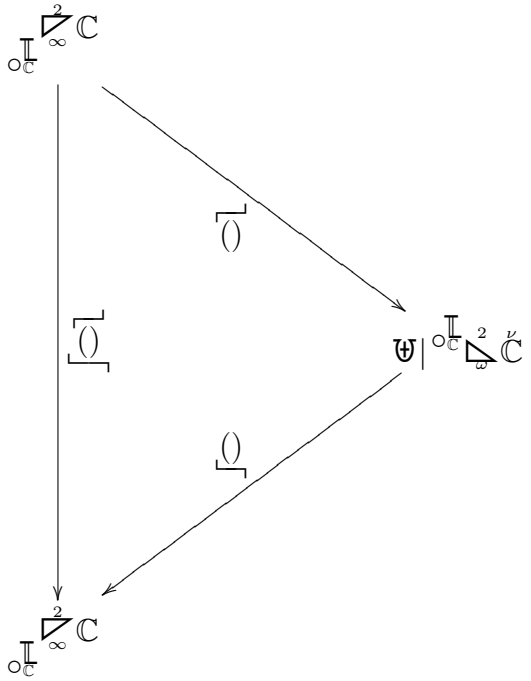
$$\mathcal{T}_{J} = \int_{\mu^0_\zeta}^{\circ\mathbb{T}_{\mathbb{C}}} \circ\mathbb{T}_{\mathbb{C}}{}_{\zeta}^{-\nu}\; {}^{\zeta}\circ\mathbb{T}_{\mathbb{C}}{}_{\zeta}^{\nu/2}\; J_{\zeta}$$

$$\mathcal{T}_z^{\mathsf{J}} = \int_{\mu_\zeta^0}^{\circ_{\mathbb{C}}^{\mathbb{I}}} {}_{\circ_{\mathbb{C}}^{\mathbb{I}}}^{z}\zeta^{-\nu} \; {}_{\circ}^{\zeta^{-1/2-\nu}}{}_{\mathbb{C}}^{\mathbb{I}}\zeta \; \mathsf{J}_\zeta$$

$$\mathfrak{U}_{\varpi} \,|\, {}_{\circ_{\mathbb{C}}^{\mathbb{I}}} \ni \mathfrak{u} \underset{\text{covariance}}{\Longrightarrow} \mathfrak{u}^{\nu} \, \ulcorner \mathfrak{q} \urcorner \, \mathfrak{u}^{-\nu} = \ulcorner \mathfrak{u} \curvearrowright \mathfrak{q} \urcorner$$

$$\ulcorner \zeta \urcorner^{\sigma} = \text{Weyl}$$

$$\mathfrak{U}_{\varpi} \,|\, {}_{\circ_{\mathbb{C}}^{\mathbb{I}}} \ni \mathfrak{u} \underset{\text{covariance}}{\Longrightarrow} \begin{cases} \mathfrak{u}^{\nu} \ulcorner \zeta \urcorner^{\sigma} \mathfrak{u}^{-\nu} & = \ulcorner \zeta_{\mathfrak{u}^{-1}} \urcorner^{\sigma} \\ \mathfrak{u}^{\nu} \ulcorner \mathfrak{q} \urcorner^{\sigma} \mathfrak{u}^{-\nu} & = \ulcorner \mathfrak{u} \curvearrowright \mathfrak{q} \urcorner^{\sigma} \end{cases}$$



$$\mathsf{J} \mapsto \ulcorner \mathsf{J} \urcorner$$