$$\begin{array}{ccc}
{}^{\ell}\mathbb{C}^{\mathsf{C}}_{=2r} & & \\
& \searrow^{Q} & \\
\downarrow & & {}^{r}_{\ell}\mathbb{C}^{\mathsf{C}}_{r} \\
& \nearrow_{Q} & \\
{}^{\ell}\mathbb{C}^{\mathsf{U}}_{\ell} \neg {}^{\ell}_{=}\mathbb{C}^{\mathsf{C}}_{2r} & &
\end{array}
\qquad
\begin{array}{ccc}
{}_{=}\mathbb{C}^{\mathsf{C}}_{2r} & & \\
& \searrow^{Q} & \\
\downarrow & & {}^{r}_{1}\mathbb{C}^{\mathsf{C}}_{r} \\
& \nearrow_{Q} & \\
\mathbb{C}^{\mathsf{U}} \neg {}_{=}\mathbb{C}^{\mathsf{C}}_{2r} & &
\end{array}$$

$$\eta | \xi \mapsto \overset{*}{\eta} \xi$$

$$x = \overset{*}{\eta} \xi = \overset{*}{\tau} \overset{2}{\lambda} \sigma$$

$$u = \overset{*}{\tau} \sigma$$

$$\overset{*}{u} x = \overset{*}{\sigma} \underline{\tau \overset{*}{\tau}} \overset{2}{\lambda} \sigma = \overset{*}{\sigma} \overset{2}{\lambda} \sigma = \overset{*}{\xi} \xi$$

$$x \overset{*}{u} = \overset{*}{\tau} \overset{2}{\lambda} \underline{\sigma \overset{*}{\sigma}} \tau = \overset{*}{\tau} \overset{2}{\lambda} \tau = \overset{*}{\eta} \eta$$

$$\overset{*}{u} x \overset{*}{u} = \overset{*}{\sigma} \underline{\tau \overset{*}{\tau}} \overset{2}{\lambda} \underline{\sigma \overset{*}{\sigma}} \tau = \overset{*}{\sigma} \overset{2}{\lambda} \tau = \overset{*}{\xi} \eta$$

$$(\overset{T}{g \sigma}) \left(\overset{T}{g^{-1} \tau} \right) = \overset{T}{\sigma} \overset{T}{g} \overset{T}{g^{-1}} \tau = \overset{T}{\sigma} \tau$$

$$\dim_{\mathbb{C}} {}^{r}_{\ell}\mathbb{C}_{r} = \ell + \ell (\ell - 1) + 2\ell (r - \ell) = \ell^2 + 2\ell (r - \ell) = 2\ell r - \ell^2$$

$$\dim_{\mathbb{C}} {}^{\ell}\mathbb{C}^{\mathsf{C}}_{\ell} = \ell^2$$