

$$\text{super-disc } W = \begin{bmatrix} w \\ \eta \end{bmatrix}$$

$$\begin{aligned}
& \frac{1 - w\bar{w} \mid -\bar{\eta}w}{-\eta\bar{w} \mid 1 - \eta\bar{\eta}}^{-1} = \frac{1}{1 - \bar{w}w - \bar{\eta}\eta} \frac{1 - \bar{\eta}\eta \mid \bar{\eta}w}{\eta\bar{w} \mid 1 - w\bar{w} - 2\bar{\eta}\eta} \\
& \frac{1 - w\bar{w} \mid -\bar{\eta}w}{-\eta\bar{w} \mid 1 - \eta\bar{\eta}} \frac{1 - \bar{\eta}\eta \mid \bar{\eta}w}{\eta\bar{w} \mid 1 - w\bar{w} - 2\bar{\eta}\eta} = \frac{1 - w\bar{w} - \bar{\eta}\eta \mid 0}{0 \mid 1 - w\bar{w} - \bar{\eta}\eta} \\
& s_w^\alpha = \frac{1}{1 - \bar{w}w - \bar{\eta}\eta} \frac{1 - \bar{\eta}\eta \mid \bar{\eta}w}{\eta\bar{w} \mid 1 - w\bar{w} - 2\bar{\eta}\eta} \frac{\alpha - w\bar{w} \mid -\bar{\eta}w}{-\eta\bar{w} \mid \alpha - \eta\bar{\eta}} \frac{(1 - \alpha) \begin{bmatrix} w \\ \eta \end{bmatrix}}{1 - \bar{w}w - \alpha\bar{\eta}\eta} = \\
& \frac{1}{1 - \bar{w}w - \bar{\eta}\eta} \frac{\alpha(1 - \bar{\eta}\eta) - \bar{w}w \mid (\alpha - 1)w\bar{\eta}}{(\alpha - 1)\eta\bar{w} \mid \alpha(1 - w\bar{w}) + (1 - 2\alpha)\bar{\eta}\eta} \frac{(1 - \alpha)w \mid (1 - \alpha)\eta}{(\alpha - 1)\bar{w} \mid (\alpha - 1)\bar{\eta}} \frac{1 - \alpha(\bar{w}w + \bar{\eta}\eta)}{1 - \alpha(\bar{w}w + \bar{\eta}\eta)} \\
& \det \frac{1 - z\bar{w} \mid -z\bar{\eta}}{-\zeta\bar{w} \mid 1 - \zeta\bar{\eta}} = 1 - z\bar{w} + \zeta\bar{\eta}
\end{aligned}$$