$$\overline{\mathcal{N}}_{\beta} = f_{\beta}(\mathcal{N}) \stackrel{\mathcal{P}}{\nearrow}$$

$$\overline{\mathcal{N}} = f_{1}(\mathcal{N}) \stackrel{\mathbf{g}^{\mathbf{Fisher}}}{\nearrow} \overline{P}_{\perp}$$

$$P = \begin{bmatrix} \Sigma + \mu\mu^{\mathsf{T}} & \mu^{\mathsf{T}} \\ \mu & 1 \end{bmatrix}$$

$$P = \begin{bmatrix} \Sigma + \beta\mu\mu^{\mathsf{T}} & \beta\mu \\ \beta\mu^{\mathsf{T}} & \beta \end{bmatrix}$$