$$d_{ab}^{(phys)} := \text{Euclidean (physiological) distance normalized to } [0,1]$$

$$d_{ab}^{(func)} := \frac{1}{2}\left[1 - \cos(Y_a, Y_b)\right] \in [0,1]$$

$$\underset{\text{define}}{\varsigma} := \left[d_{ab}^{(phys)}\right]^{\eta} \cdot \left[d_{ab}^{(func)}\right]^{-\gamma}, \quad (\text{positive } \eta, \gamma)$$

what is the distribution of this quantity?

find pairs (a,b) with large $\varsigma \longrightarrow$
$\begin{cases} \text{functionally close} \\ \text{physically distant} \end{cases}$

What patterns emerge? Relationship to membership diversity?

Expectation:
$\begin{cases} \text{if high ent, then longer } \langle\varsigma\rangle \\ \text{if low ent and high deg, then smaller } \langle\varsigma\rangle \end{cases}$

? ? ?

$\rightarrow$ RSP ?

$\langle\varsigma\rangle$

VISp?

Entropy