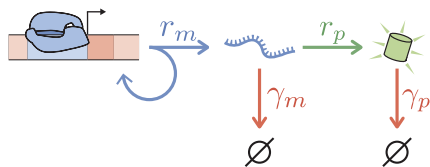


(A) toy model for mRNA and protein copy numbers



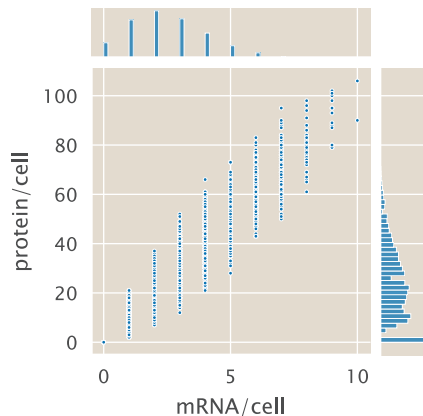
mRNA probability distribution

$$P(m) = \frac{e^{-r_m/\gamma_m} \left(\frac{r_m}{\gamma_m}\right)^m}{m!}$$

protein probability distribution

$$P(p \mid m) = \frac{e^{-m \cdot r_p/\gamma_p} \left(m \frac{r_p}{\gamma_p}\right)^p}{p!}$$

(B) mRNA and protein joint distribution



(C) Venn diagram of additive relationships between entropies

