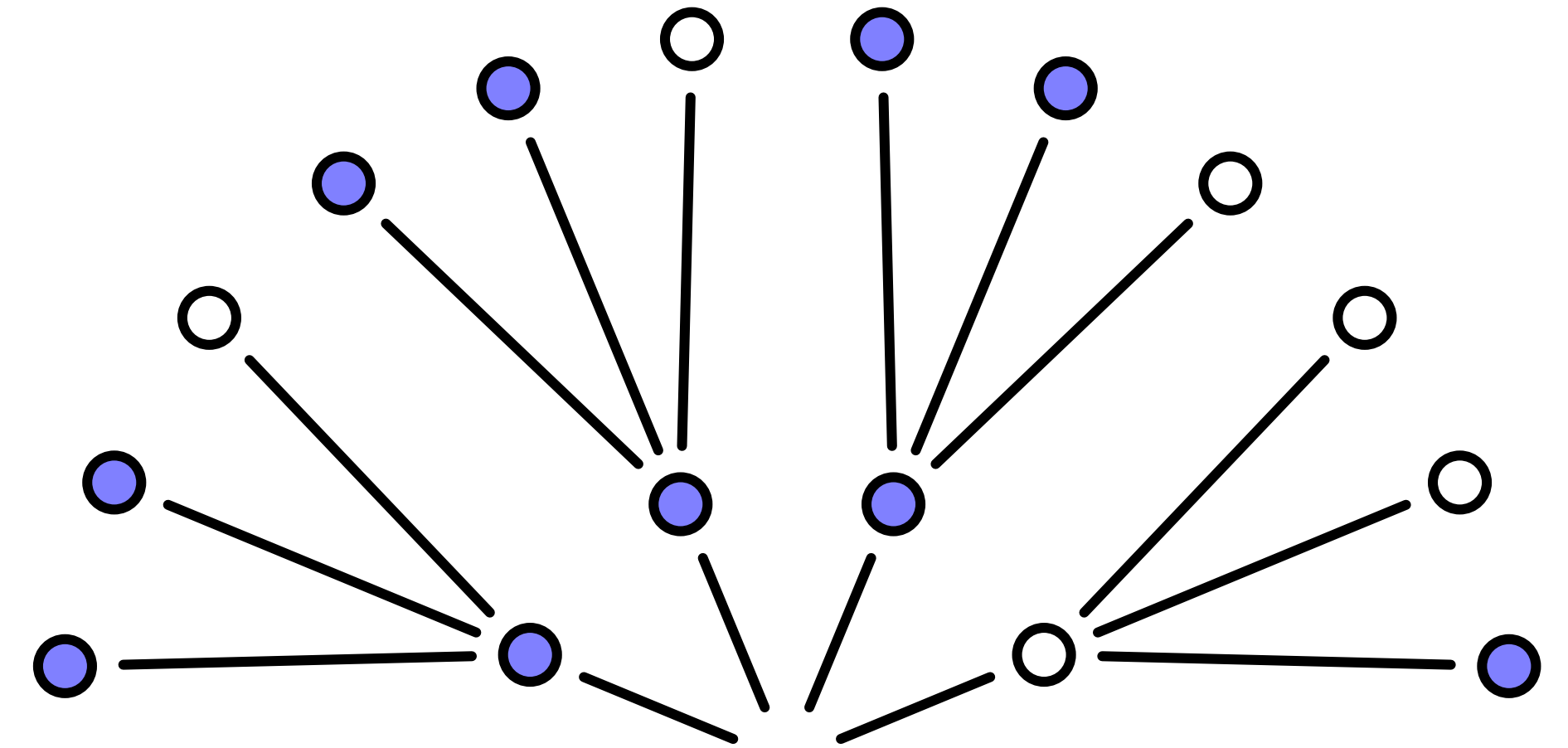# Misclassification estimator

$$\Pr(\text{water}|p,x) = p(1-x) + (1-p)x$$

$$\Pr(\text{land}|p,x) = (1-p)(1-x) + px$$

Proportion of water

Posterior distribution for *p* given *W,L,x*:

$$\Pr(p|W,L,x) = \frac{[p(1-x) + (1-p)x]^W \times [(1-p)(1-x) + px]^L}{Z}$$