

$$\underline{x_{(i)}} \xrightarrow{P(x_{i+1}|x)} x_{i+1}$$

$$P(x'|x) = \sum_h P(\underline{x'}|h) P(\underline{h}|x)$$

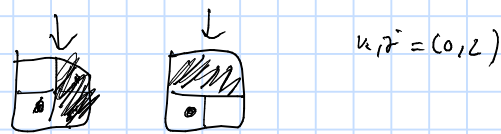
$$x_{\text{trans}} = \overline{T}(x)$$

$$P(x^{\text{trans}} | x^{\text{trans}})$$

$$x' = T(x^{\text{trans}'})$$

$$V \rightarrow T(v) \xrightarrow{P(h|T(v))} h \xrightarrow{P(v'|h)} v' \rightarrow T^{-1}(v')$$

$$T(v) = v[:-1, :]$$



$$P(h_{ik}^i | x_{ik}) \quad i=0,1$$

$$P(T(h_{ik}^i) | T(x_{ik})) = P(h_{ik}^i | x_{ik})$$

IF  $\boxed{E(x)}$  is cheap than CRB is not good

$$\boxed{E(x) = \sum \underline{\vec{\theta}}_{ij} x_i x_j} \quad \text{Self learning MC}$$

$$\underline{E(x) = \log(1 + e^{wx})}$$

needs to be local