

# Generative Process for $Y | X = x$ (ARIMEC)

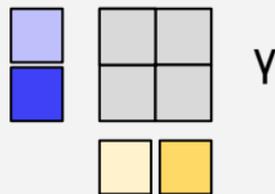
$$x = \begin{array}{|c|c|} \hline \text{light blue} & \text{red} \\ \hline \end{array}$$

$$\mathbb{X} = \begin{array}{|c|c|} \hline \text{light blue} \\ \hline \text{blue} \\ \hline \end{array} \times \begin{array}{|c|} \hline \text{red} \\ \hline \end{array} \quad \mathbb{Y} = \begin{array}{|c|} \hline \text{yellow} \\ \hline \end{array} \times \begin{array}{|c|} \hline \text{green} \\ \hline \end{array}$$

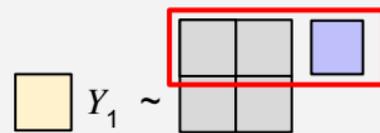
Partition  $\mathcal{P}_1$  with most entropy

$$\left\{ \begin{array}{|c|c|} \hline \text{light blue} \\ \hline \text{blue} \\ \hline \end{array} \begin{array}{|c|} \hline \text{red} \\ \hline \end{array}, \begin{array}{|c|c|} \hline \text{light blue} \\ \hline \text{blue} \\ \hline \end{array} \begin{array}{|c|} \hline \text{red} \\ \hline \end{array} \right\}$$

Perform MEC



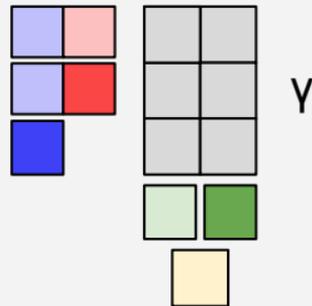
Sampling  $Y_1$



Partition  $\mathcal{P}_2$  with most entropy

$$\left\{ \begin{array}{|c|c|} \hline \text{light blue} \\ \hline \text{blue} \\ \hline \end{array} \begin{array}{|c|} \hline \text{red} \\ \hline \end{array}, \begin{array}{|c|c|} \hline \text{light blue} \\ \hline \text{blue} \\ \hline \end{array} \begin{array}{|c|} \hline \text{red} \\ \hline \end{array}, \begin{array}{|c|c|} \hline \text{light blue} \\ \hline \text{blue} \\ \hline \end{array} \begin{array}{|c|} \hline \text{red} \\ \hline \end{array} \right\}$$

Perform MEC



Sampling  $Y_2$

