

$$p(x, y) = \begin{pmatrix} .05 & .05 & .05 & 0 & 0 & 0 \\ .05 & .05 & .05 & 0 & 0 & 0 \\ 0 & 0 & 0 & .05 & .05 & .05 \\ 0 & 0 & 0 & .05 & .05 & .05 \\ .04 & .04 & 0 & .04 & .04 & .04 \\ .04 & .04 & .04 & 0 & .04 & .04 \end{pmatrix}$$

Three row clusters:

$$\hat{x}_1 = \{x_1, x_2\}, \hat{x}_2 = \{x_3, x_4\} \text{ and } \hat{x}_3 = \{x_5, x_6\}$$

Two column clusters:

$$\hat{y}_1 = \{y_1, y_2, y_3\} \text{ and } \hat{y}_2 = \{y_4, y_5, y_6\}$$

$$\begin{pmatrix} .5 & 0 & 0 \\ .5 & 0 & 0 \\ 0 & .5 & 0 \\ 0 & .5 & 0 \\ 0 & 0 & .5 \\ 0 & 0 & .5 \end{pmatrix} \begin{pmatrix} .3 & 0 \\ 0 & .3 \\ .2 & .2 \end{pmatrix} \begin{pmatrix} .36 & .36 & .28 & 0 & 0 & 0 \\ 0 & 0 & 0 & .28 & .36 & .36 \end{pmatrix} = \begin{pmatrix} .054 & .054 & .042 & 0 & 0 & 0 \\ .054 & .054 & .042 & 0 & 0 & 0 \\ 0 & 0 & 0 & .042 & .054 & .054 \\ 0 & 0 & 0 & .042 & .054 & .054 \\ .036 & .036 & .028 & .028 & .036 & .036 \\ .036 & .036 & .028 & .028 & .036 & .036 \end{pmatrix}$$

$p(x|\hat{x})$ $p(\hat{x}, \hat{y})$ $p(y|\hat{y})$ $q(x, y)$