



## Why

### Definition

*conditional density*

### Notation

Let  $f : \mathbf{R}^d \rightarrow \mathbf{R}$  a density. For  $i, j = 1, \dots, d$  and  $i \neq j$ , let  $f_{i|j} : \mathbf{R}^2 \rightarrow \mathbf{R}$  satisfy

$$f_{ij}(\xi, \gamma) = f_{i|j}(\xi, \gamma)f_j(\gamma)$$

for  $\xi, \gamma \in \mathbf{R}$ .



