

## Chapter 2: Decoding: Making Predictions

### 2.1 Definitions

$\mathcal{X}$  denotes possible inputs,  $\mathcal{Y}$  is a set of all possible outputs. For some inputs, some outputs are not feasible (same input length condition, for example). We will use  $\mathcal{Y}_x$  to subset feasible combinations.

**Decoding** is finding the best  $y \in \mathcal{Y}$  given  $x \in \mathcal{X}$ . Decoding as a term is attributed to Fred Jelinek (from information theory) and  $y$  is considered a message encoded with a representation in  $x$ .