

# Why is it easier to deal with?

$$e^* = \operatorname{argmax}_{e \in E} \underbrace{p(e)}_{\text{Language model}} \underbrace{p(f|e)}_{\text{Translation model}}$$

Language model

Translation model

- $p(e)$  models the *fluency* of the translation
- $p(f|e)$  models the *adequacy* of the translation
- $\operatorname{argmax}$  is the search problem implemented by a *decoder*