

Given:

- parallel bilingual corpora  $B_1, B_2, \dots B_n$  aligning sentences in languages  $L_1, L_2 \dots L_n$  with their translations into English (EN)
- a parallel multi-lingual corpus  $M$  aligning sentences across languages  $L_1 \dots L_n$

Loop:

1. Create translation models  $L_1 \Rightarrow EN \dots L_n \Rightarrow EN$  from each of the bilingual corpora
2. For each sentence alignment in  $M$  create a candidate pool of translations using the translation models to translate their respective languages
3. Build up machine-translated bilingual corpora  $\bar{B}_1 \dots \bar{B}_n$ . Choose a translation from the candidate pool and align it with the sentences in  $M$ . Add these alignments to the machine-translated bilingual corpora
4. Select subsets of  $\bar{B}_1 \dots \bar{B}_n$  and add them to  $B_1 \dots B_n$ . Remove the subsets from  $M$  in subsequent rounds of co-training