**Motivation & Approach**

- Parallel texts are often less than equivalent due to a range of translation divergences.
- Identifying these translation divergences enables fuller utilization of parallel texts in downstream tasks (Vyas et al., 2018; Briakou and Carpuat, 2021).
- The Abstract Meaning Representation (Banarescu et al., 2013) formalism has been expanded to languages other than English in a variety of ways.
- We propose an **annotation schema to identify specific points of divergence between parallel AMR graphs**.

- Present a categorization schema to identify both type and cause of divergence, in order to:
  1. Make the data more adaptable to cross-lingual NLP applications.
  2. Identify non-literal translations.
  3. Make AMR more cross-lingual consistent (Song et al., 2019).
  4. Provide information on the way in which annotation, semantics, and syntax may play a role in cross-lingual AMR parsing (Damonte, 2019).

- Annotate a small corpus of English-Spanish parallel AMRs (Migueles-Abraira, 2017) from *The Little Prince* with our schema.
- Analyze the ways in which cross-lingual parallel AMRs may differ in annotation.

**Classification Schema**

![Classification Schema Diagram](image)

**Distribution of Corpus**

![Distribution of Corpus](image)

- **Considerable difference in proportion of structural divergence due to each cause**

**Annotated Examples**

**No divergence**

- **English:** Draw me a sheep...
  - *(d / draw-0)*
  - :ARG0 (y / you)
  - :ARG1 (s / sheep)
  - :ARG2 (i / i)
  - :mode imperative

- **Spanish:** Dibújame una oveja...
  - Literal translation: Draw me a sheep...
  - *(d / dibujar)*
  - :ARG0 (t / tú)
  - :ARG1 (o / oveja)
  - :ARG2 (y / yo)
  - :mode imperative

**diffarg.s synt**

- **English:** The fourth planet belonged to a businessman.
  - *(b / belong-0)*
  - :ARG0 (p / planet)
  - :ARG1 (o / ordinal-entity :value 4)
  - :ARG2 (f / fire)
  - :location (c / chimney))

- **Spanish:** El cuarto planeta era de un hombre de negocios.
  - Literal translation: The fourth planet was of a businessman.
  - *(p / pertenecer)*
  - :ARG0 (p2 / planeta)
  - :ord (e / entidad-ordinal :value 4)
  - :ARG1 (h / hombre)
  - :mod (n / negocios))

- **omitnoncore, synt (2)**
  - **English:** That is funny!
  - *(f2 / funny)*
  - :domain (t2 / that)

  - **Spanish:** ¿Qué gracioso!
  - Literal translation: How funny!
  - *(g / gracioso)*
  - :grado (t / tan)

**focus, anno**

- **English:** Volcanic eruptions are like fires in a chimney.
  - *(e / erupt-0)*

  - **Spanish:** Las erupciones volcánicas son como el fuego de una chimenea.
  - Literal translation: Volcanic eruptions are like the fire of a chimney.

**omitnoncore, synt**

- **English:** Which is your planet?
  - *(p / planet)*
  - :pos (y / you)
  - :domain (a / amr-unknown)

- **Spanish:** ¿De qué planeta eres?
  - Literal translation: What planet are you from?

**focus, sem**

- *(s / ser-de-91)*
  - :ARG1 (t / tú)
  - :ARG2 (p / planeta)
  - :campo (a / amr-desconocido))

**Dataset:** https://github.com/shirawein/spanish-english-amr-corpus