

# Is Less More? Quality, Quantity and Context in Idiom Processing.

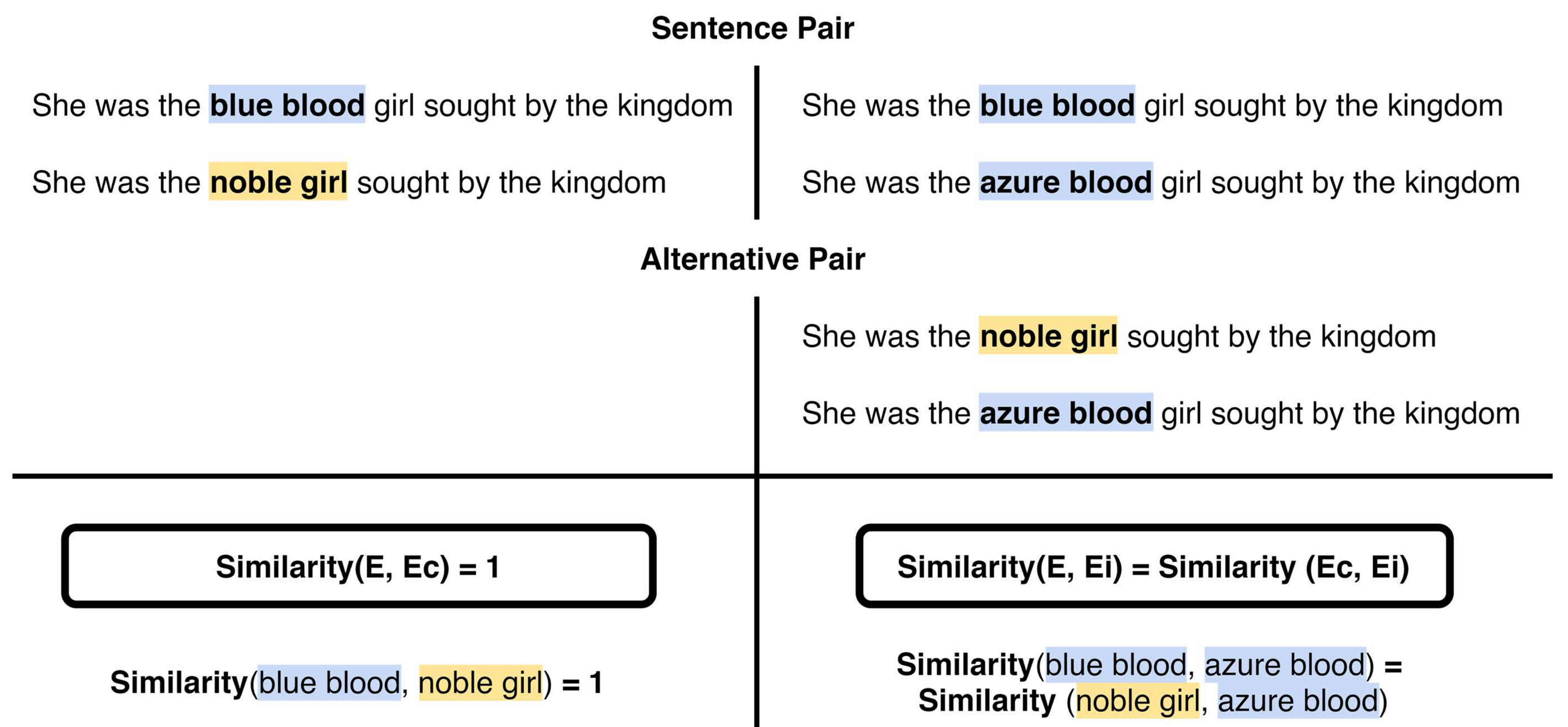
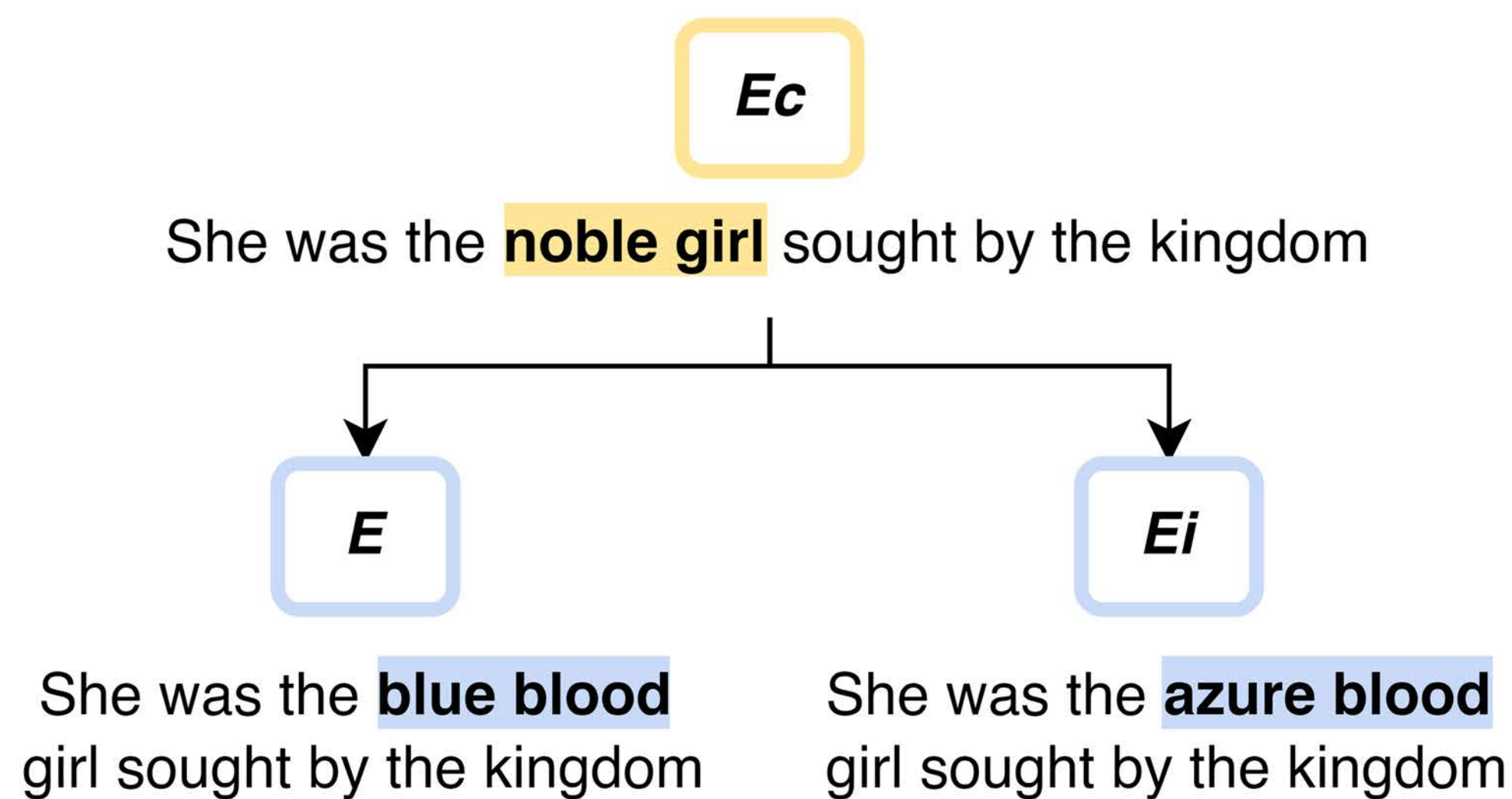
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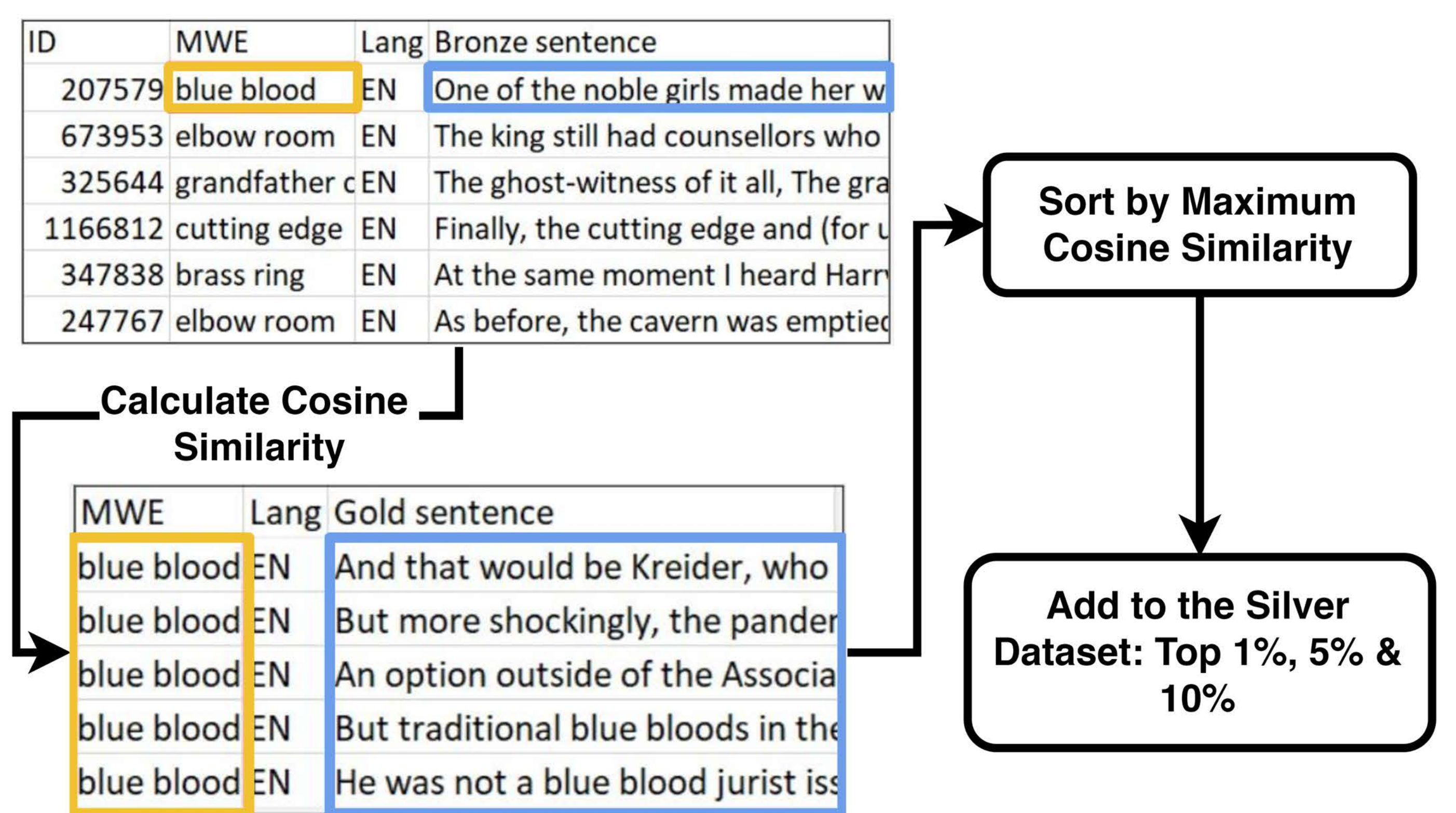
## Datasets: Noun Compound Synonym Substitution in Books – NCSSB

**Bronze Dataset:** Fully automatic approach, scraping Project Gutenberg English corpus for **sentences with synonyms of idioms**.



**Silver Dataset:** Top 1%, 5% and 10% of the Bronze dataset when **ranked according to cosine similarity** with frequency count vectors of sentences for a given MWE in the SemEval dataset.

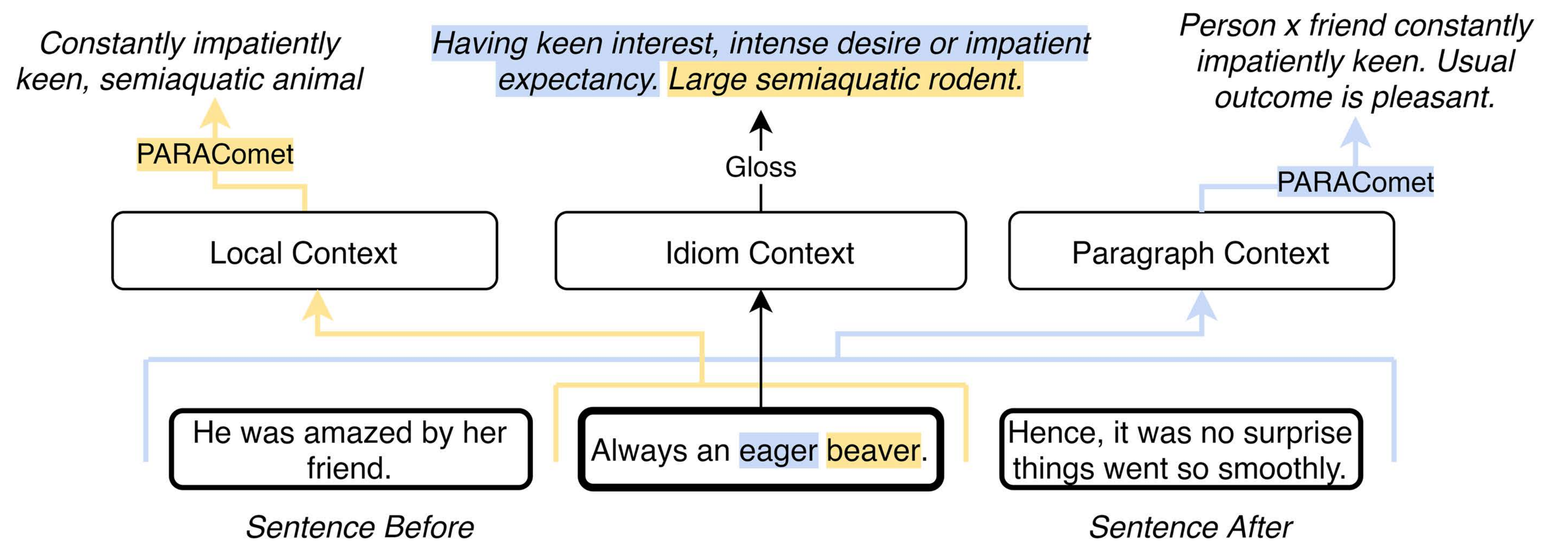
**Gold Dataset:** Manual approach, **hand-labelled** by 2 to 3 annotators, where Silver dataset is used as a base.



## Models: Context & Knowledge

Pretrained **mBERT model** is enhanced with **3 types of context**:

- **Idiom constituent word** knowledge
- **Sentence-wide context** knowledge
- **Paragraph-wide context** knowledge, including sentences coming before and after



## Results

### Dataset Quality vs Quantity?

For **non-enhanced** models, **quantity** is important

For **enhanced** models, **quality** is important

### Local Knowledge vs External Knowledge?

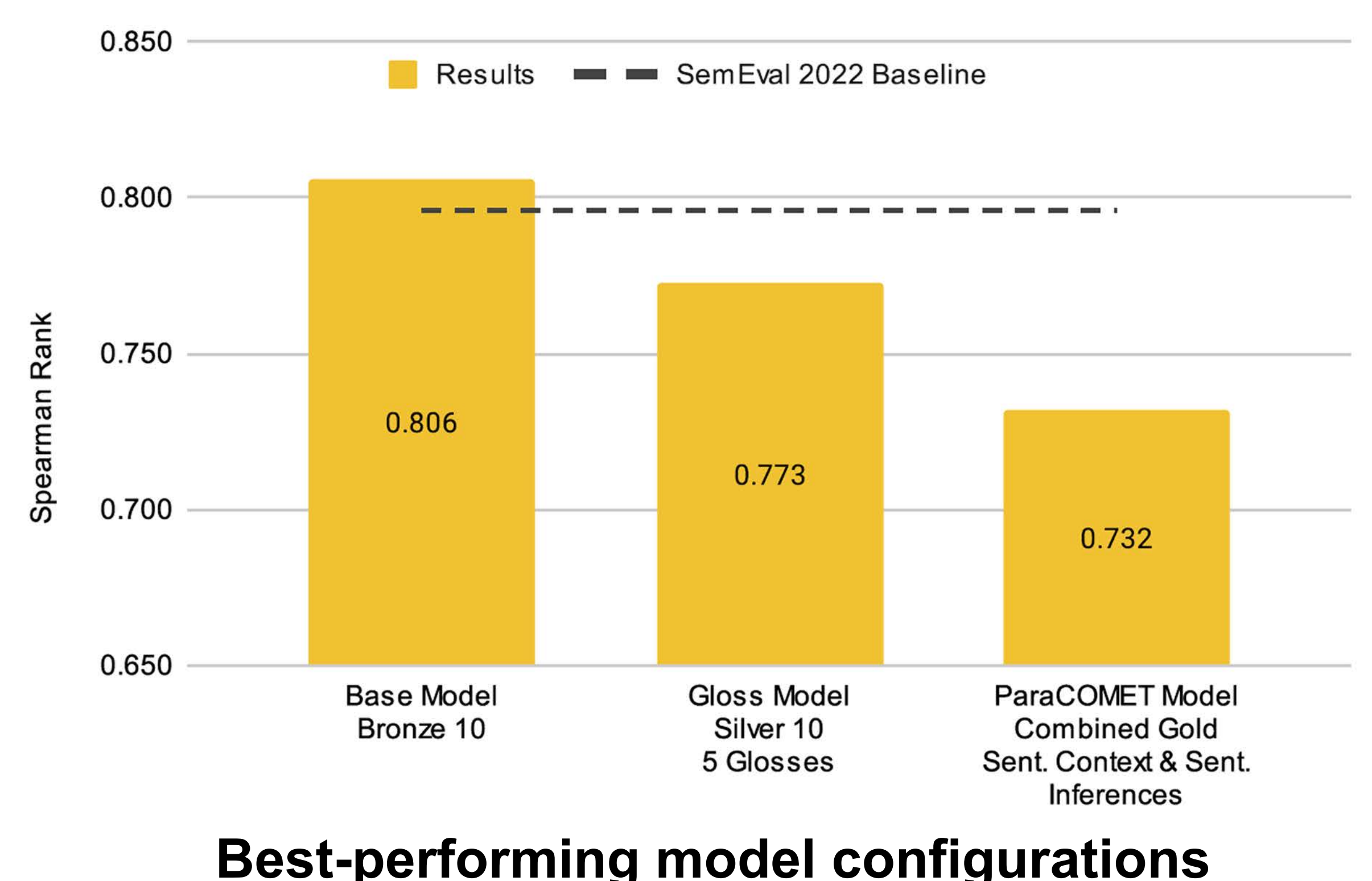
**Paragraph** & surrounding sentences context is generally **not useful**

**Idiom** constituent word & **target sentence** knowledge is the most **useful**

### Quality Data + Well-targeted Context = Best Models?

If model enhancement quality decreases, dataset size needs to increase

Enhanced models still need a quality dataset of considerable size to outperform basic approaches



Best-performing model configurations