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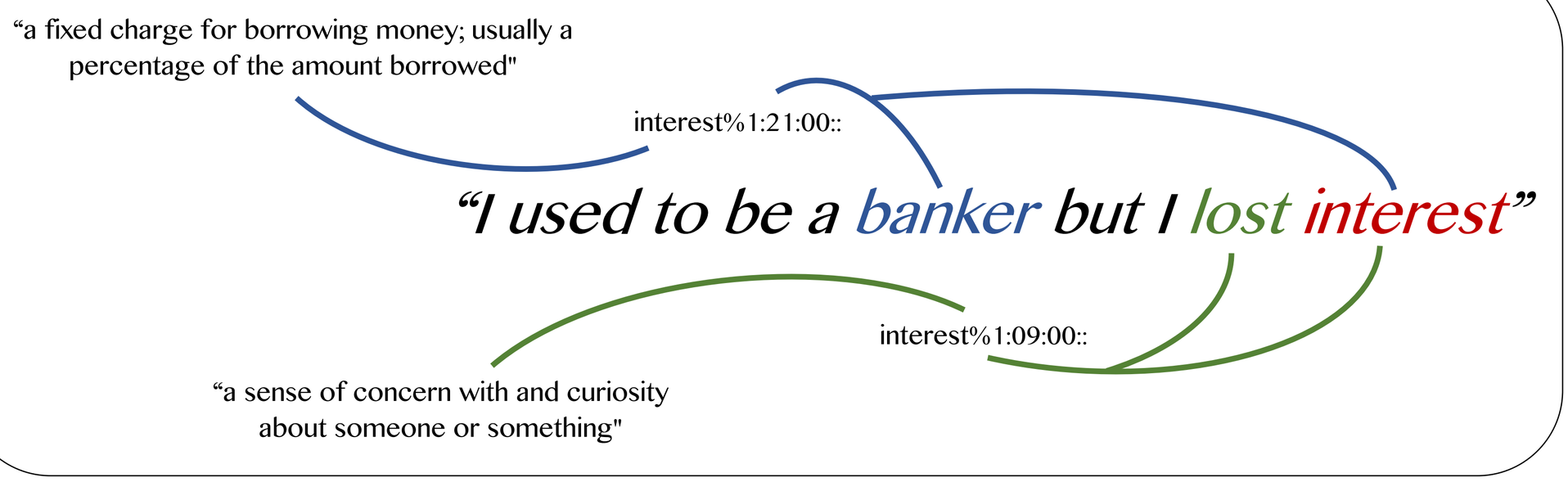
Automatic Pun Interpretation

via Knowledge-driven NLP

Aim

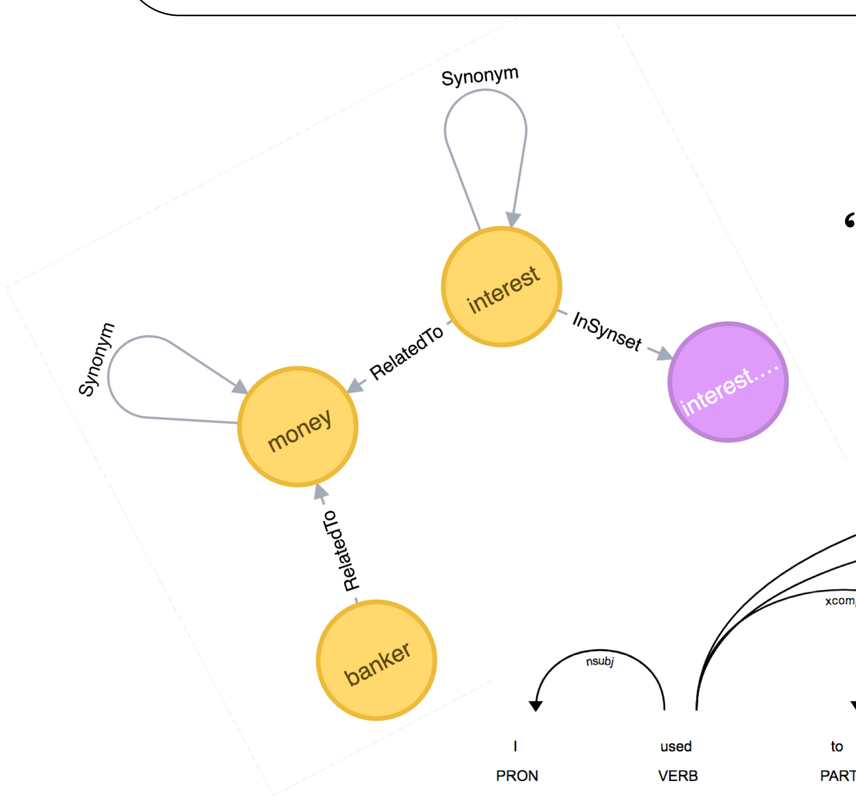
The project focuses on the challenge of interpreting the multiple meanings of a homographic pun by obtaining the relevant WordNet sense keys for the ambiguous word.

SemEval 2017 Task 7 – "Detection and Interpretation of English Puns" presented the first organised public evaluation on the problem. Systems using statistical methods scored highly on pun detection. But for interpretation the highest scoring systems obtained F1 scored no higher than 0.16 against a baseline of 0.13



Motivation

Many Linguists hold that that an individual has only mastered a particular language when they are able to understand and create humour in it. Therefore methods enabling automatic disambiguation and interpretation of humorous information, so allowing Natural Language Processing to mature.

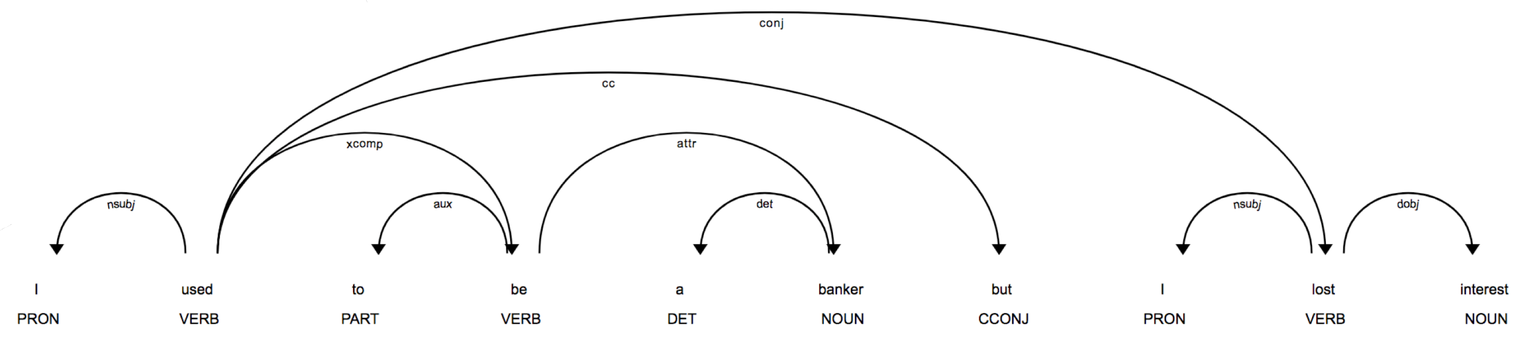


'banker'

banker.n.01 'financier', 'moneyman'

banker.n.01 'teller', 'cashier', 'bank clerk'

banker.n.02 'money handler', 'money dealer'



Knowledge-Driven Approach

- Knowledge bases and semantic corpora workout rather than "guess" pun interpretations.
  - Utilises the common-sense and relational knowledge held in ConceptNet.
- Enhanced Word Sense Profiles – a novel approach at relating not words but their meanings.
  - Novel knowledge graph traversal techniques to determine most suitable senses