JAMR:

A Graph-Based Parser for the Abstract Meaning Representation

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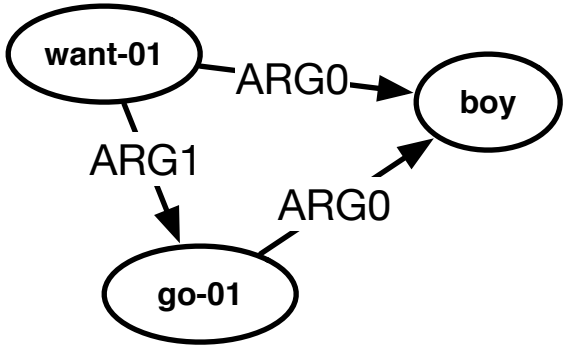
Abstract Meaning Representation (AMR)

The boy wants to go.

```
(w / want-01
  :ARG0 (b / boy)
  :ARG1 (g / go-01)
          :ARG0 b))
```



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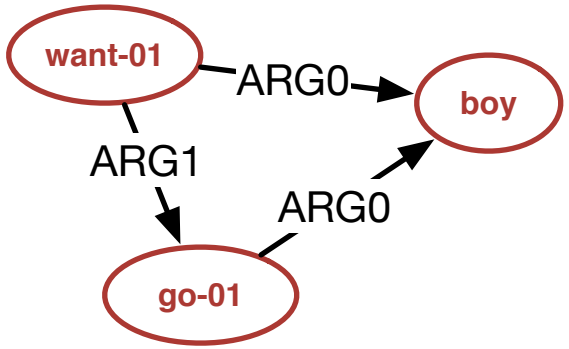

Concepts = Nodes

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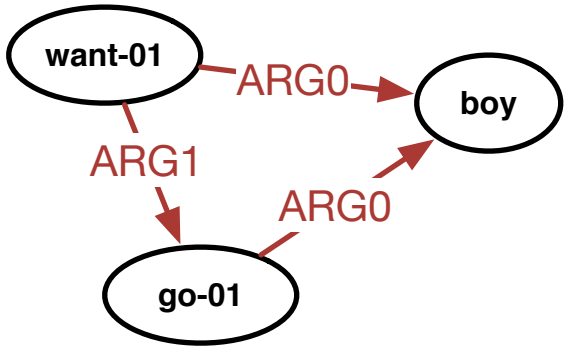
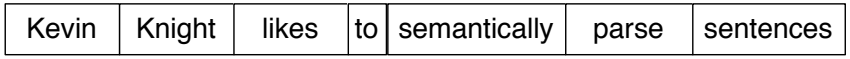


Relations = Edges

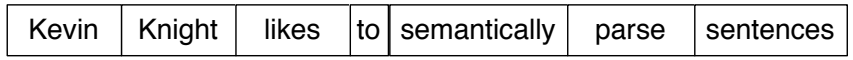
Parser Overview

Input

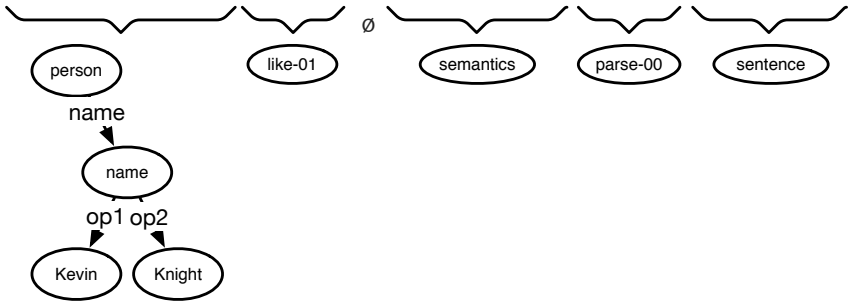


Parser Overview

Input

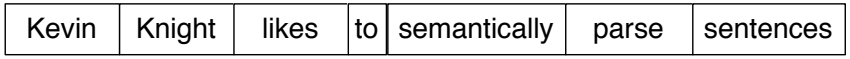


Concept ID

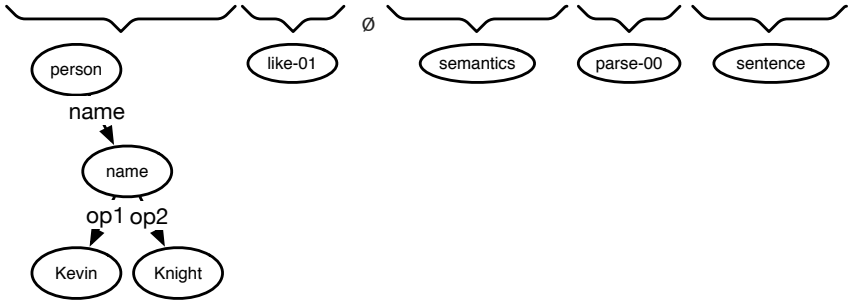


Parser Overview

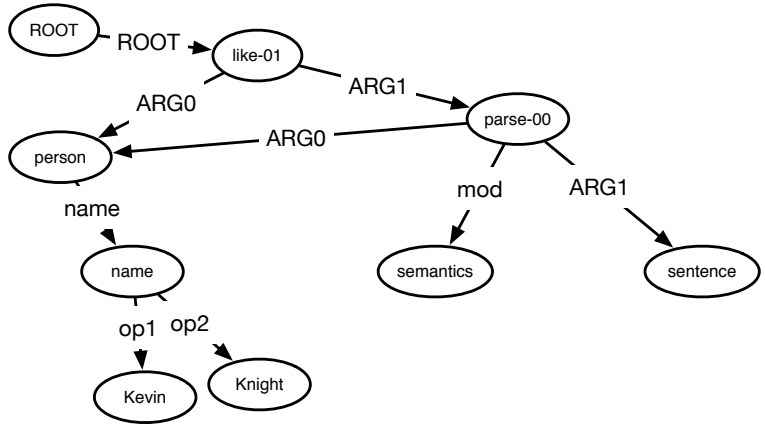
Input



Concept ID



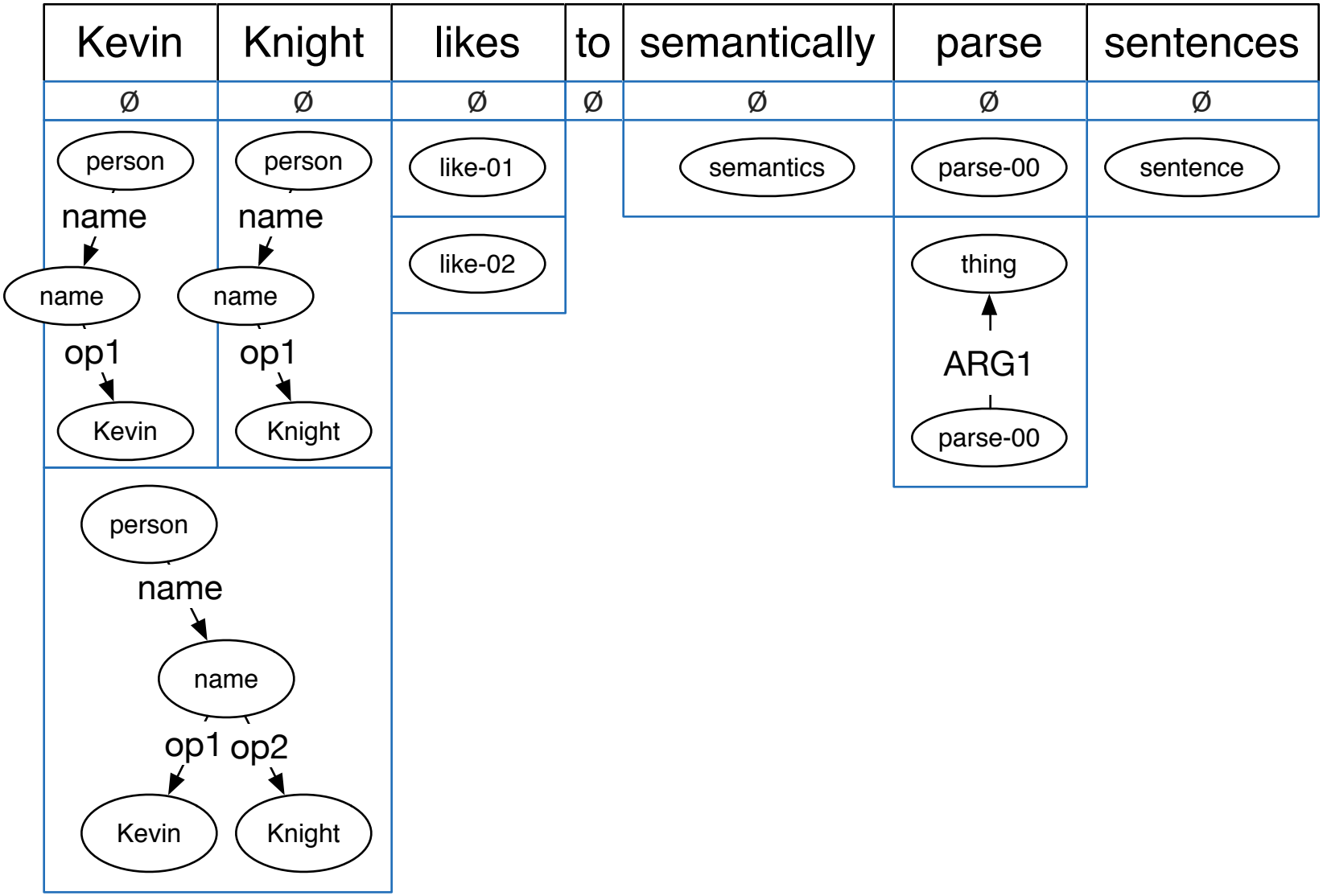
Relation ID



Concept Identification

Kevin	Knight	likes	to	semantically	parse	sentences

Concept Identification



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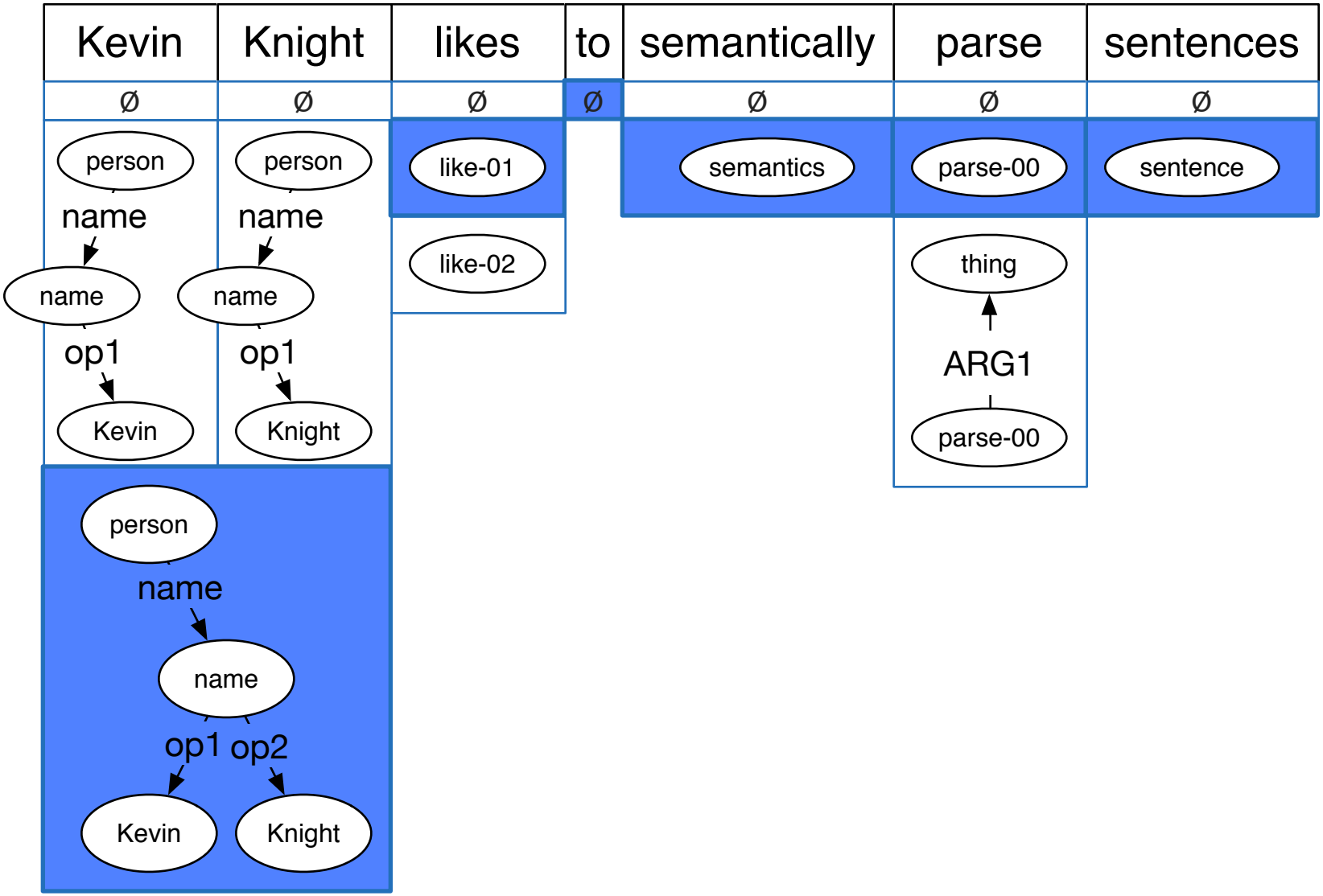

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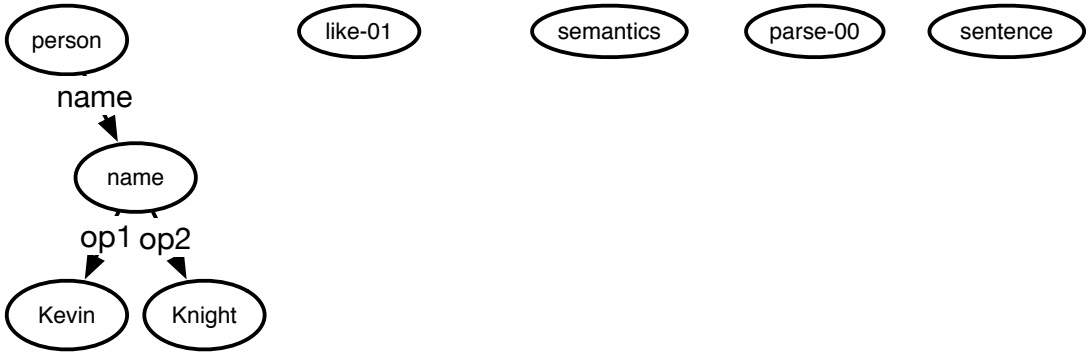

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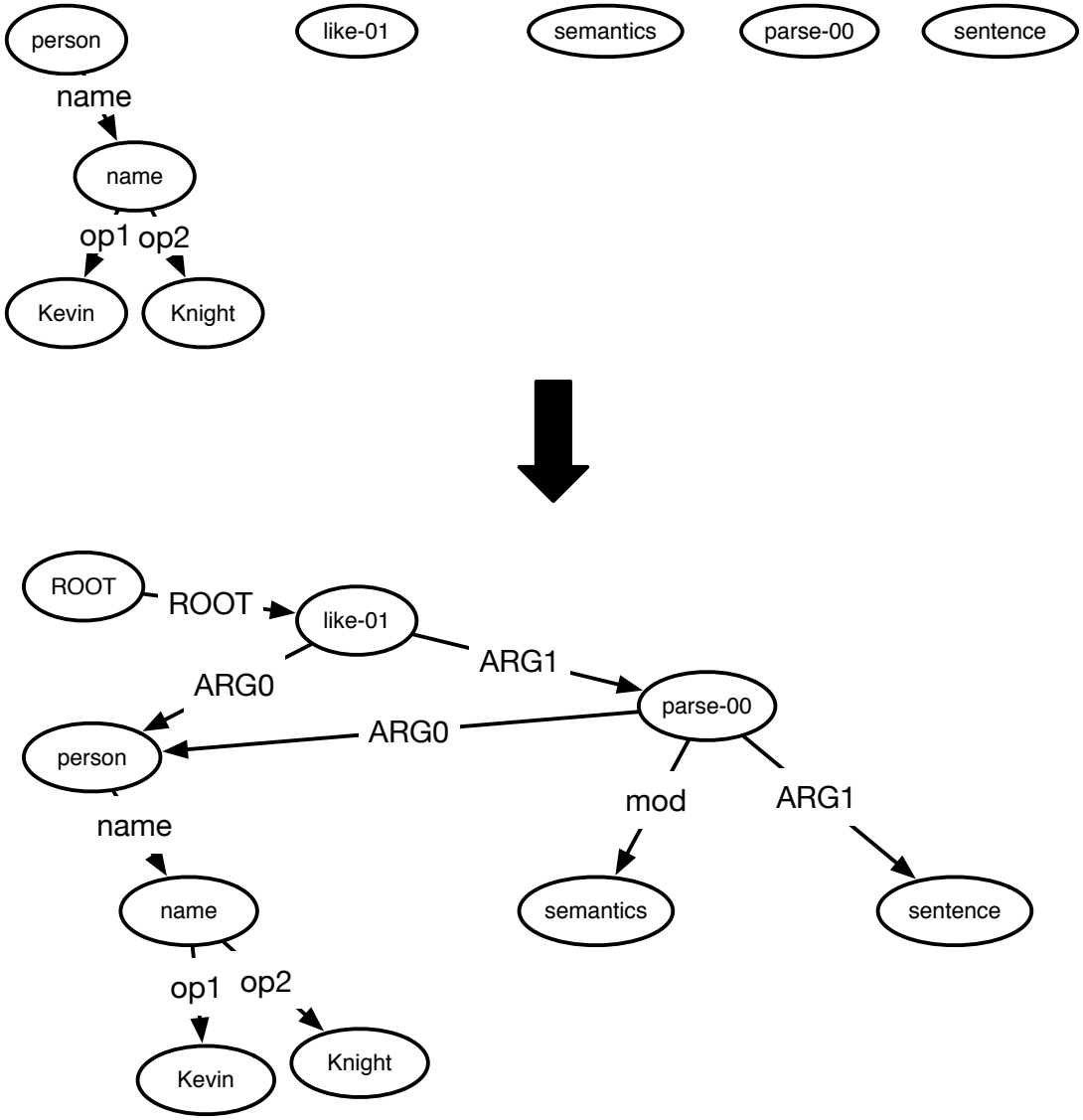

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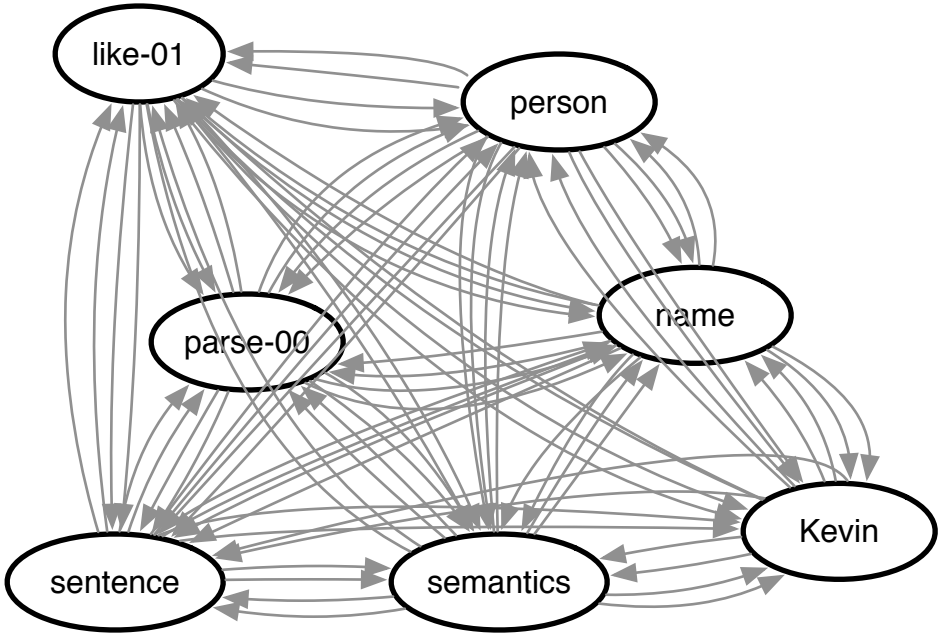
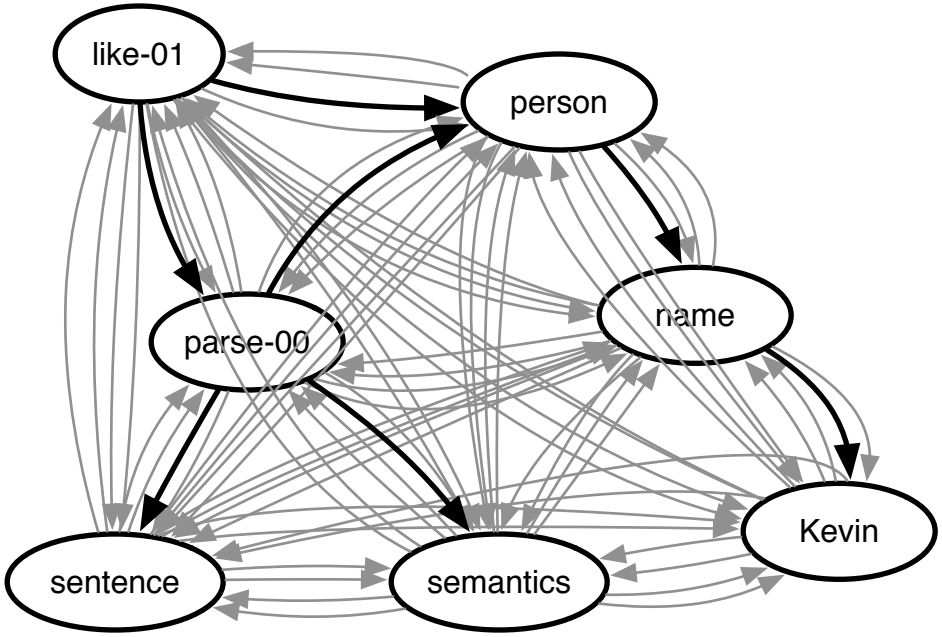


Maximum Subgraph with Constraints



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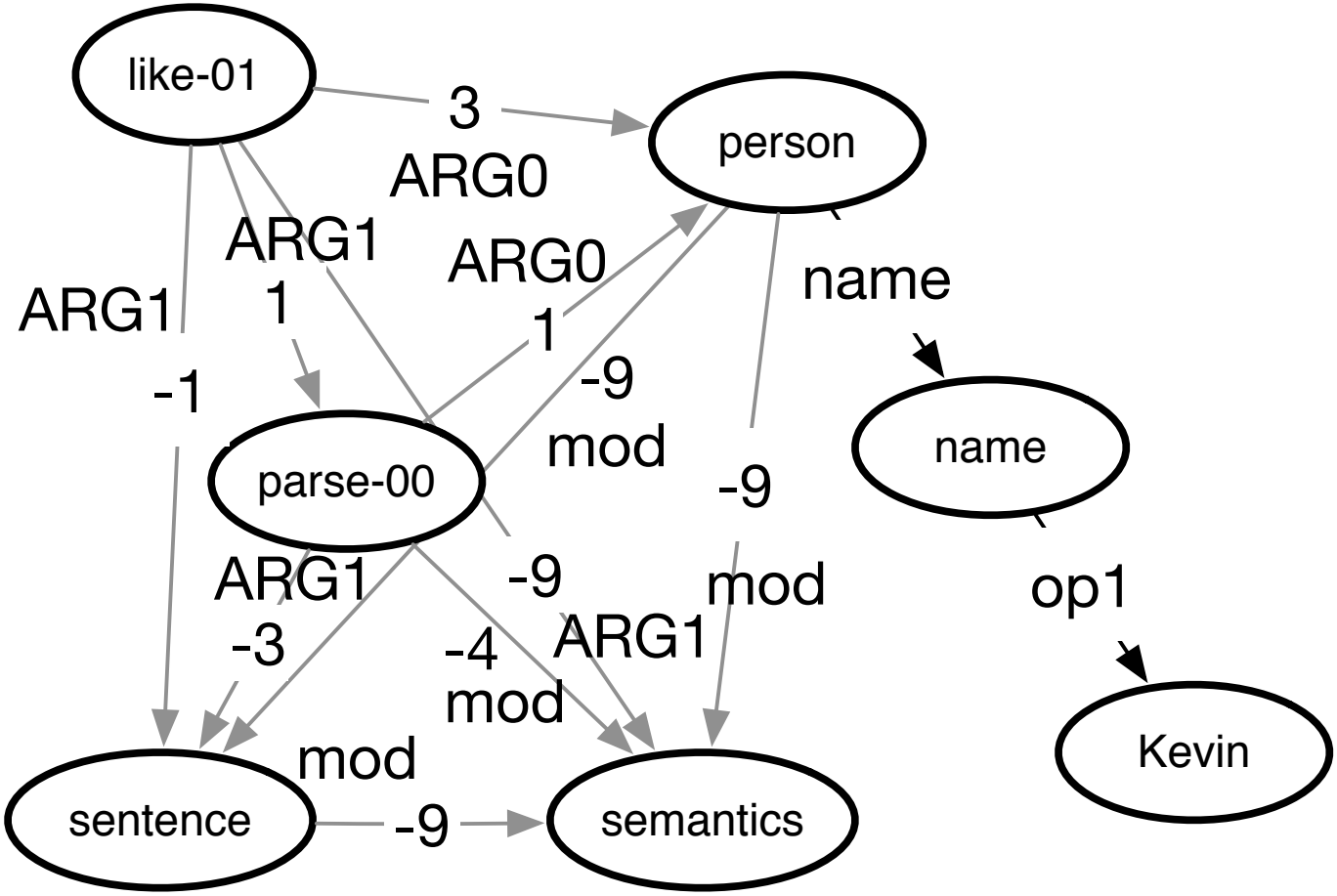

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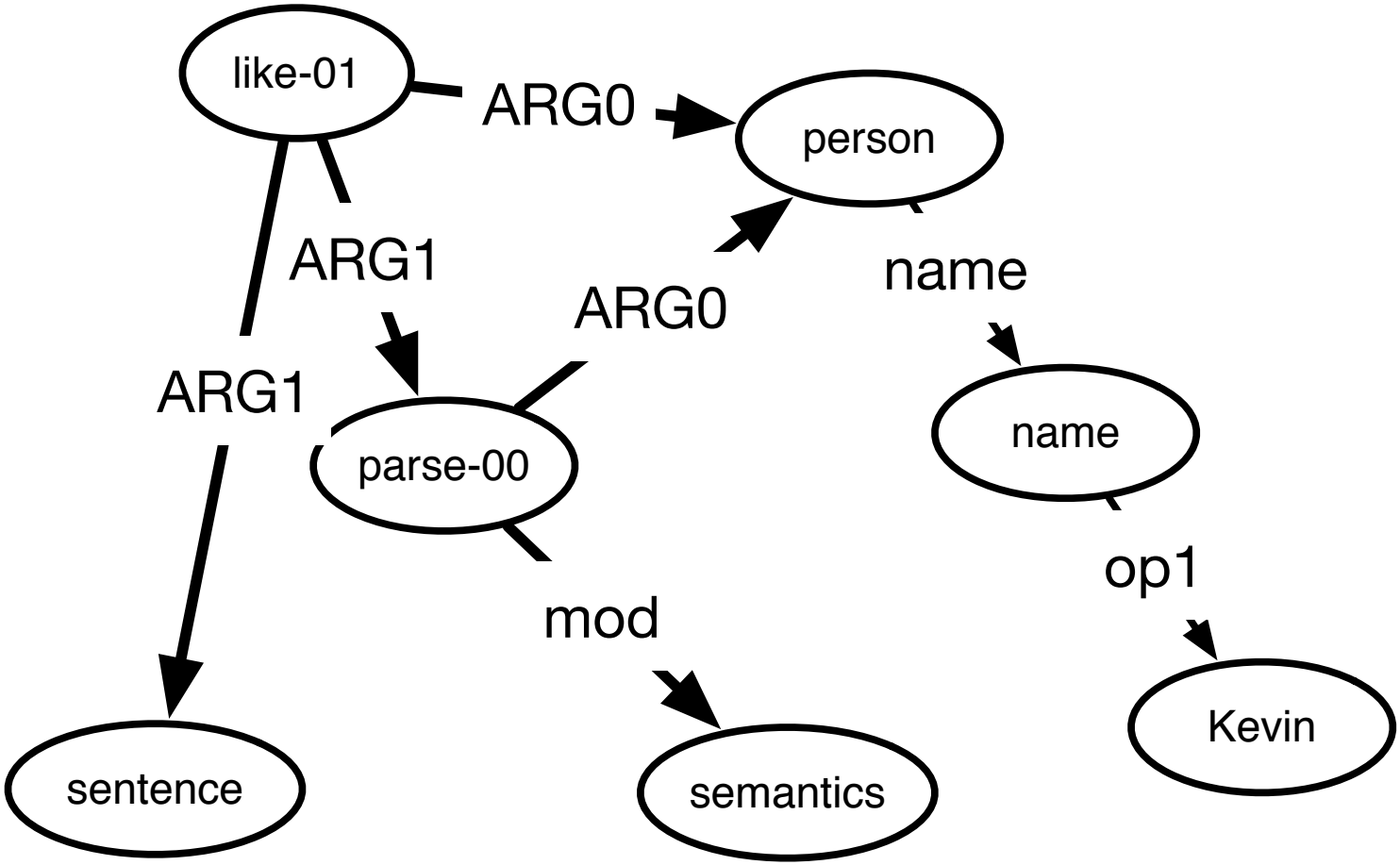
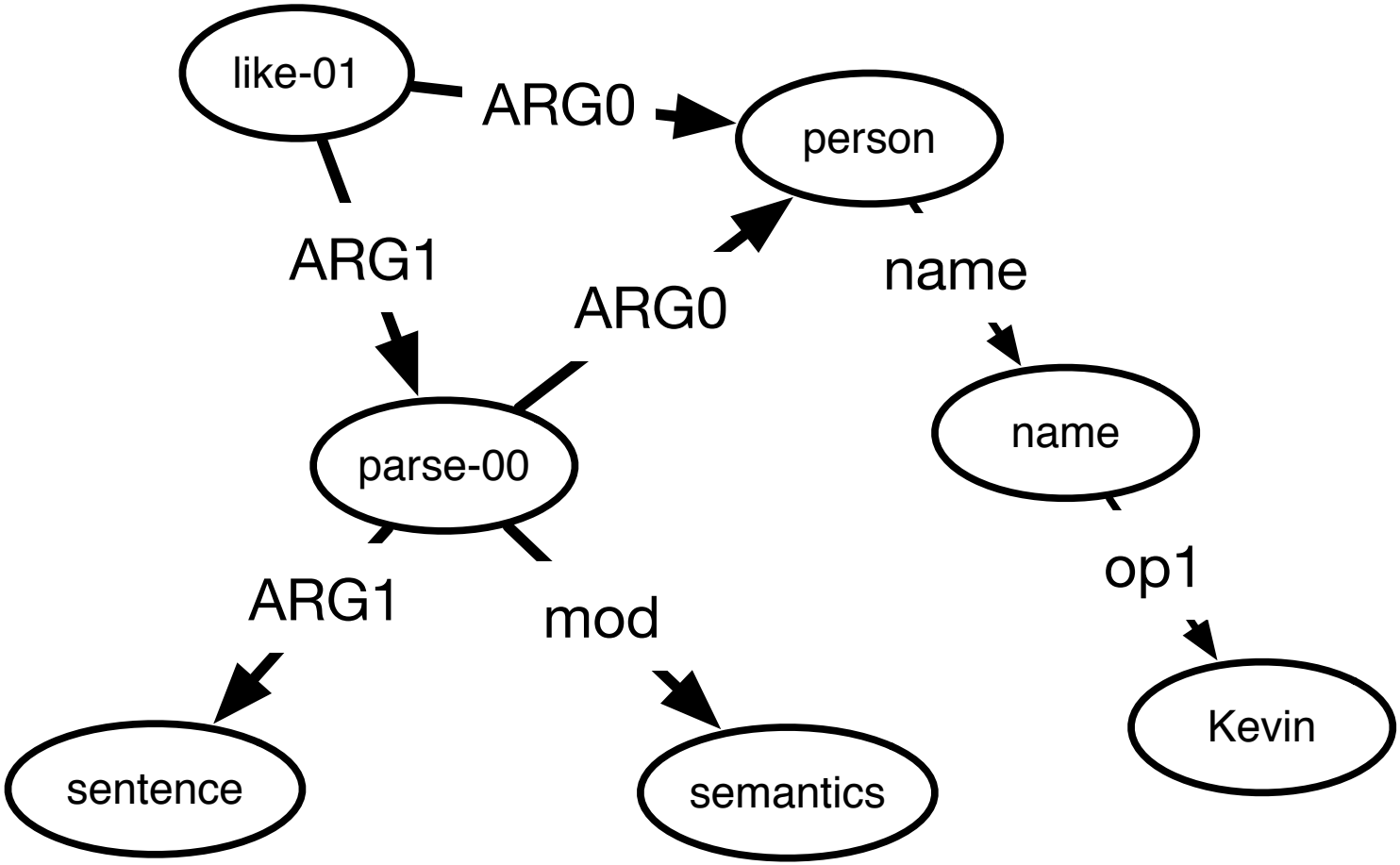


Final Output

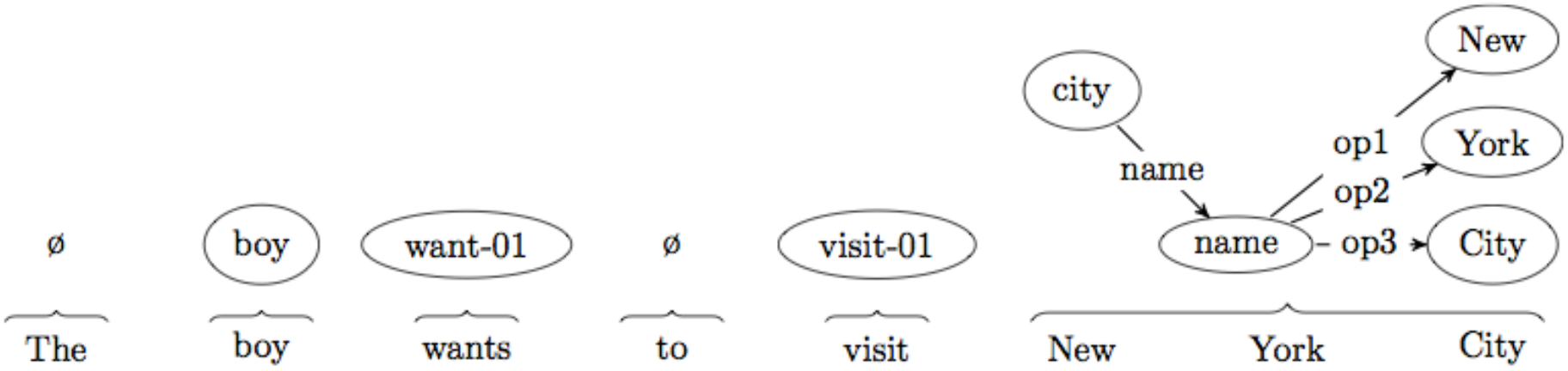


Experiments

- Data
  - 4,000 training instances
  - 2,000 test
  - 2,000 dev

Concept Identification	76% F_1
Full System (gold concepts)	80% Smatch F_1
Full System	58% Smatch F_1

Rule-Based Concept Alignment



- For each concept in the amr graph, it searches the sentence for corresponding span of words using a list of rules. It uses:
  - WordNet
  - Edit Distance