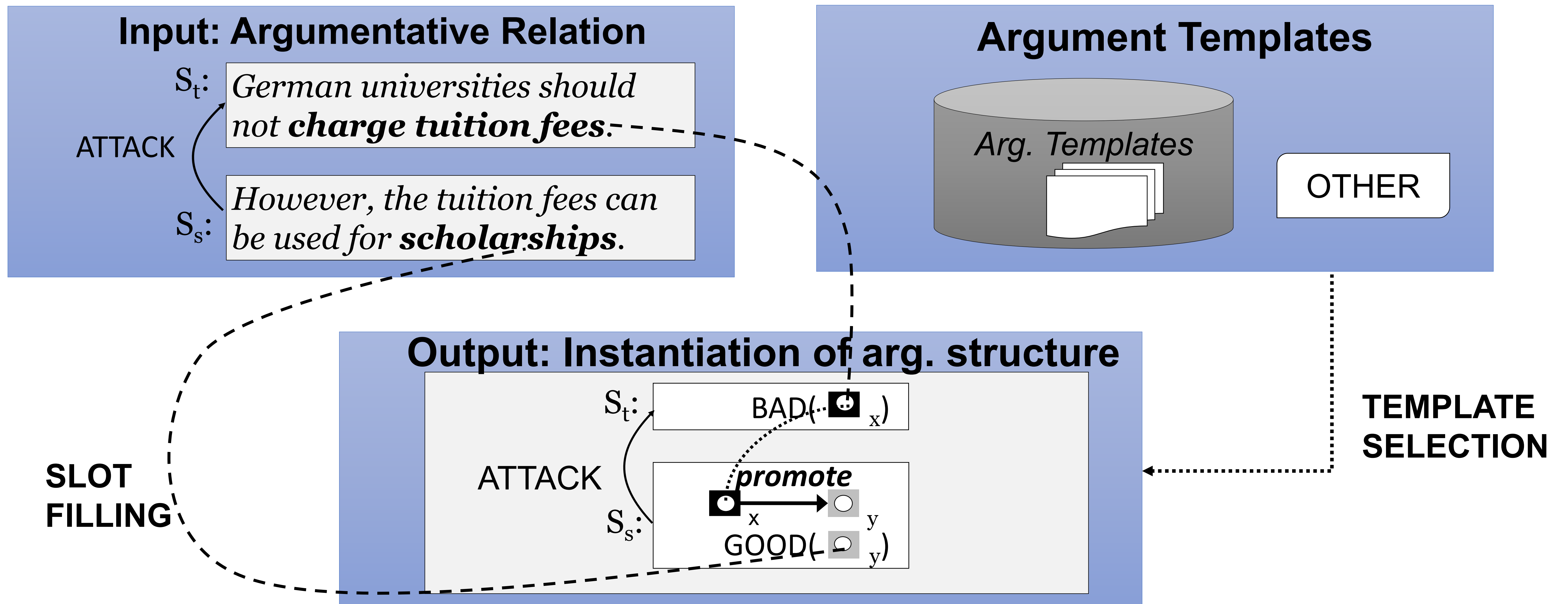


# Feasible Annotation Scheme for Capturing Policy Argument Reasoning using Argument Templates

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## Overview

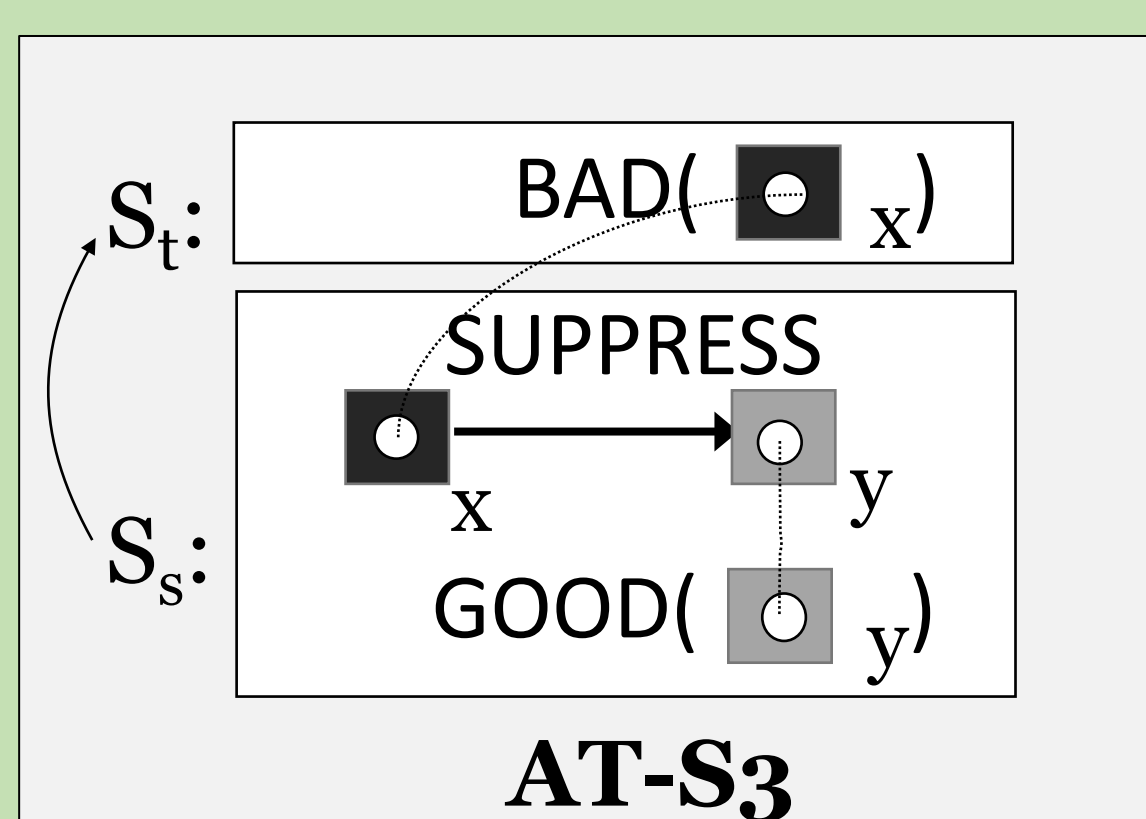
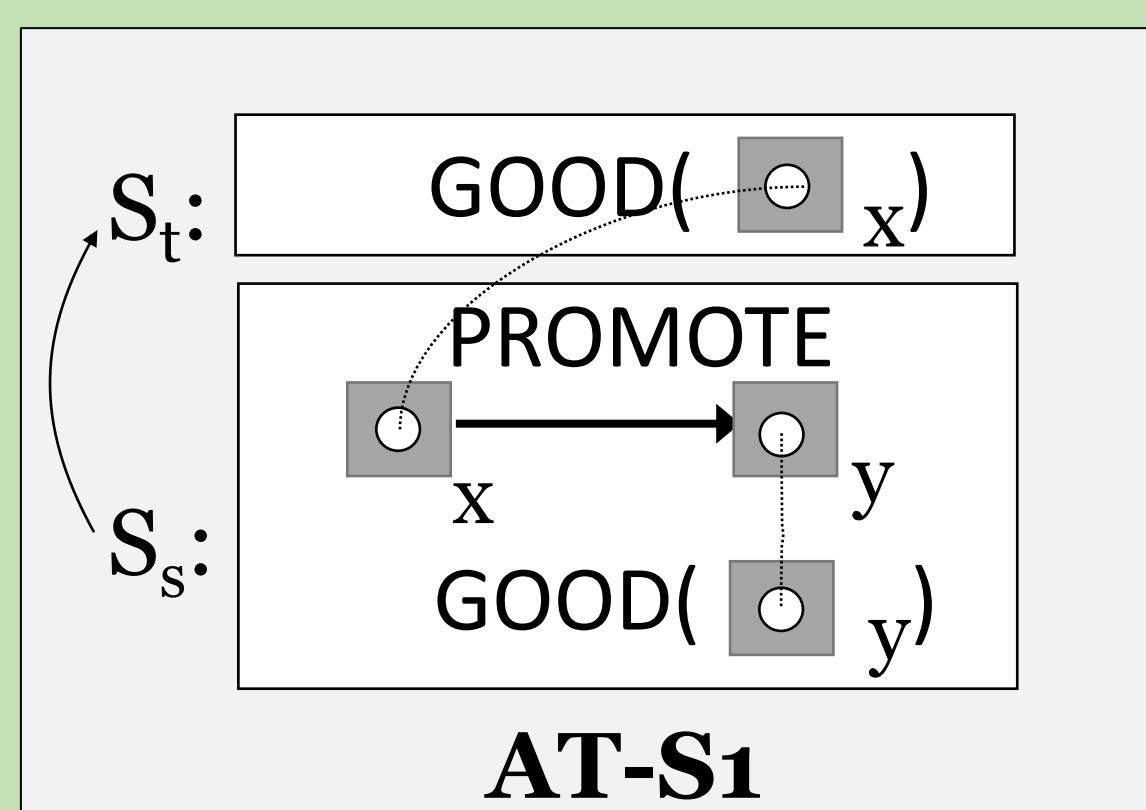
- Aim to capture **implicit reasoning** between argumentative components such as a *claim* and a *premise*
- Existing work for capturing implicit reasoning suffers from difficult annotation guidelines [Reed, 2006]
- Identifying implicit reasoning is important for applications such as *essay scoring*



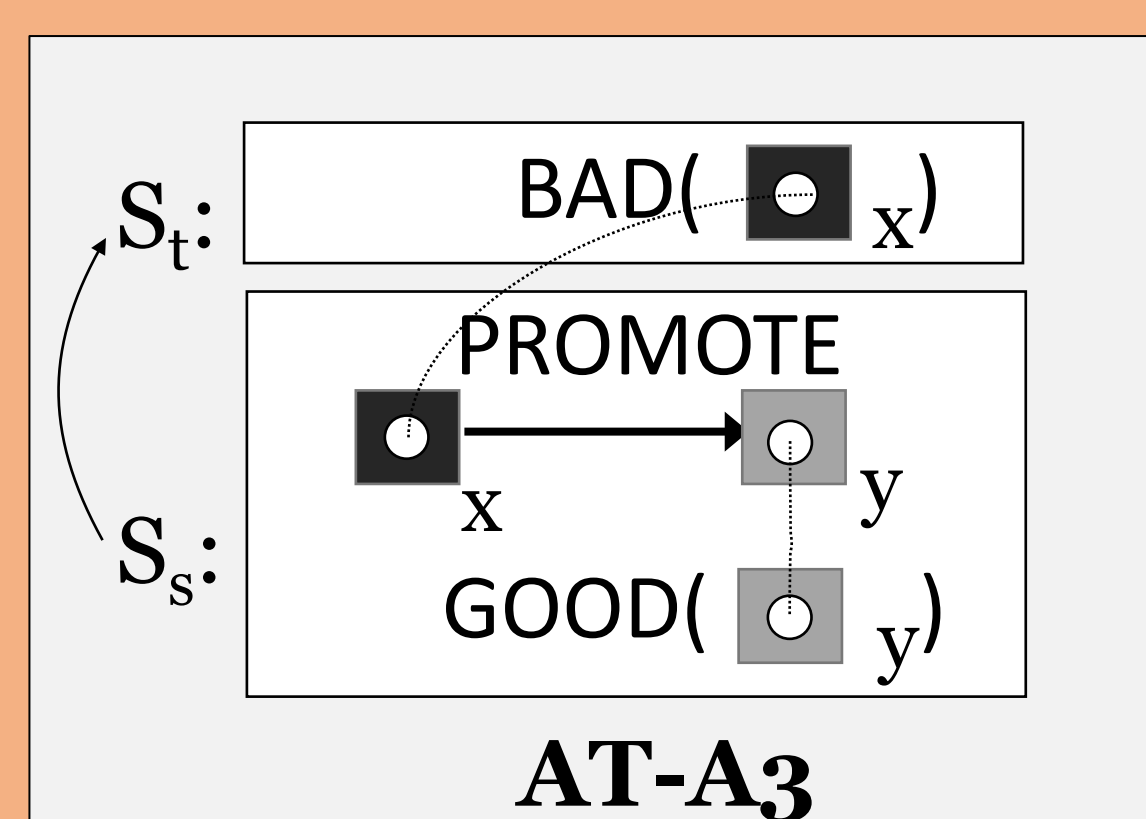
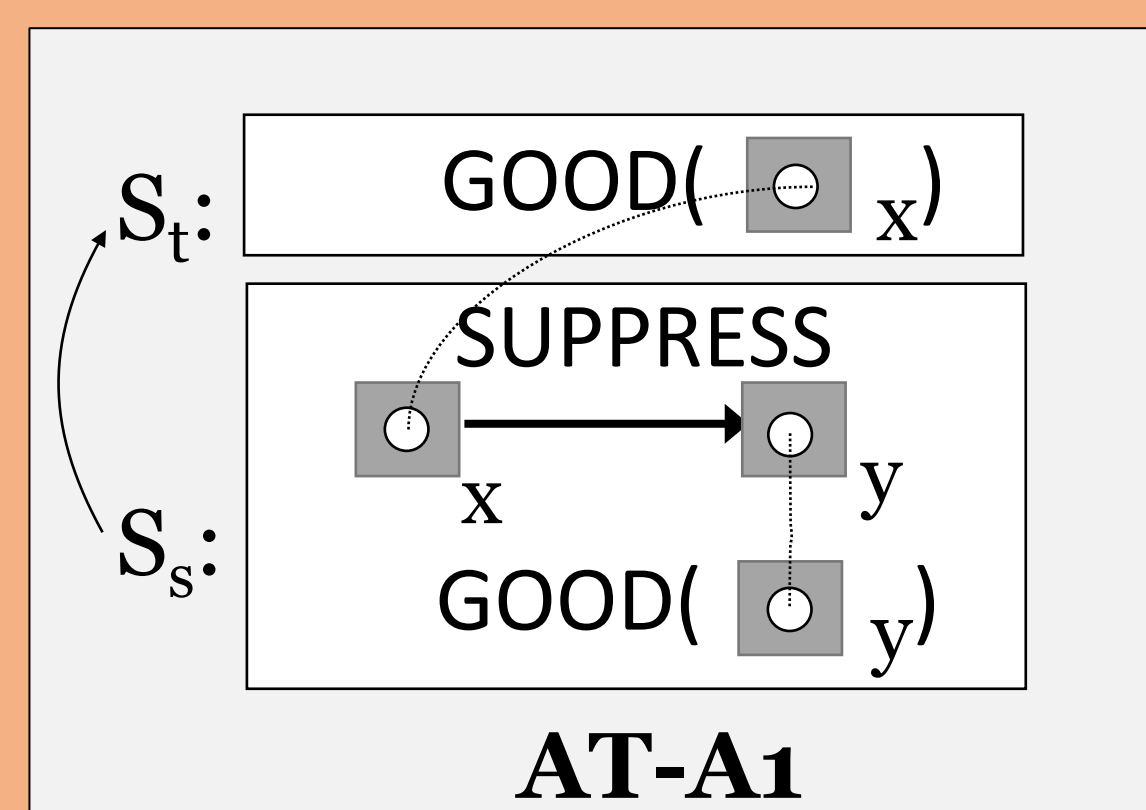
## Main Templates

- Created an inventory of **22 unique templates**
- Main ingredients include **sentiment, causality, and argumentative relation**
- Ingredients **complementary of each other**

### SUPPORT TEMPLATES

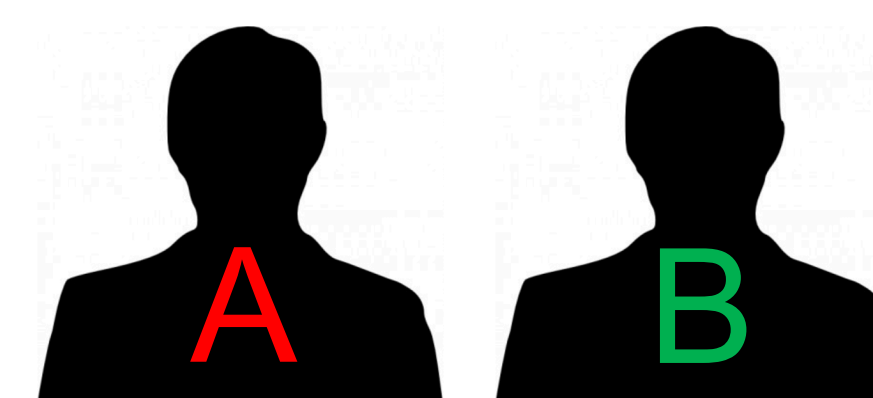


### ATTACK TEMPLATES



## Annotation Study

- Observe two metrics: **inter-annotator agreement (IAA)**, and **template coverage**
- Annotate templates on top of 89 texts from the arg-microtext corpus [Peldzsus and Stede, 2015]



IAA	Coverage
0.80	74.6% (173/232)

Two fluent English speakers

- IAA considers the following semantically compatible instances.



## Computational Model

### Architecture

- Treat the task as structured prediction with an inference constraint via templates

### Results

Model	F1
Non-constrained	0.21
Template-constrained	0.38

## Contacts / Acknowledgement

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## Future Work

- Large-scale counter-argument generation via crowdsourcing
- Identification of common fallacies using results