

# Global Coherence

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**Coherence relations, entity salience, and topical salience all focus on local coherence.**

- However, discourses must be globally coherent as well!
  - Stories have an overall narrative structure
  - Persuasive essays follow specific argument structure
  - Scientific papers are characterized by a structure common across research publications

# Argumentation Structure

- **Argumentation mining:** The computational analysis of rhetorical strategy
- Persuasive arguments generally contain well-defined argumentative components:
  - **Claim:** The central, controversial, component of the argument
  - **Premise:** A persuasive support or attack of the claim or another premise

# Example: Argumentation Structure

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Claim

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Claim

Premises supporting  
the claim

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Claim

Premises supporting  
the claim

Premise supporting  
the second premise

# How can we detect argumentation structure?

- Classifiers to identify claims, premises, and non-argumentation
- Methods to detect specific argumentation schemes
  - Argument from example
  - Argument from cause to effect
  - Argument from consequences
  - Etc.
- Related research: Studying how components of argument structure are associated with persuasive success



# We can apply similar methods to scientific discourse.

- In scientific papers, authors need to:
  - Indicate a scientific goal
  - Develop a method for reaching that goal
  - Provide evidence for the solution
  - Compare to prior work
- Parallel to argumentation structure: Each paper tries to make a **knowledge claim!**
- Modeling scientific discourse is an active research problem, as is modeling other global discourse structures (e.g., stories)

