CS4001: Computing, Society and Professionalism

Sauvik Das | Assistant Professor

Core & Logical Structure of Arguments

January 25th, 2018

Elements of an Argument

- An **argument** states a **claim** and supports it with **reasons** and evidence from sources.

- When you make an argument, you become its **proponent.**

- **Counterarguments** stand in opposition to your argument / claim. They are arguments that try to explain why your argument is wrong. The person making the counterargument is your **opponent.**

Classical Arguments

- Patterned after persuasive speeches of ancient Greek and Roman orators.

- **Structure:**
    - Introduction
    - Presentation of writer's position
    - Summary of opposing views
    - Response to opposing views
    - Conclusion

Introduction

- **Purpose**: connect to the audience, get their attention

- **Structure**:
  - Attention grabber (e.g., a memorable scene)
  - Explanation of issue and needed background
  - Thesis
  - Forecasting

- *"Tell 'em what you're about to tell them"*

Presentation of writer's position

- **Purpose**: Support thesis
- **Structure**:
  - Main body of essay
  - Present and support each reason in turn
    - Tie to a value or belief held by the audience

- *"Tell 'em"*

Summary of opposing views

- **Purpose**: Establish knowledge of alternative viewpoints
- **Structure:**
  - Fair and complete summary of opposing viewpoints

Response to opposing views

- **Purpose**: Illustrate in what ways the proponent's thesis is superior and inferior to the opposing views

- **Structure**
  - Refute or concede to opposing views
  - Show weaknesses in opposing views
  - Possibly concede on some strengths

Conclusion

- **Purpose**: Bring closure

- **Structure**:
  - Sum up thesis
  - Leave strong last impression
  - Call to action

- *"Tell 'em what you told 'em"*

Not the only way to do it

- Classical arguments are effective but they may not always the most persuasive.
- Other possibilities:
  - Can critique opposing views first
  - Can reserve own opinion till the end
  - Show great sympathy for opposing views
  - Etc.

The rhetorical triangle

- **Logos:** appeal from logic
  - E.g., Kantian categorical imperative and universalizing lying

- **Ethos**: appeal from character, authority, credibility
  - E.g., "I have a Ph.D. in computer security, so you should trust me on topics related to that"

- **Pathos:** appeal from emotion, audience's sympathy
  - E.g., Charity donation commercials

The Rhetorical…Rectangle?

- **Kairos**: appeal from opportunity / timing
    - Saying the right thing at the right time.

- What are examples of a kairotic argument right now?

- What are examples of a non-kairotic argument?

Issue questions and information questions

- Issue questions are the origin or arguments: Can usually be reasonably answered in multiple different ways.
  - Is CS4001 an interesting and useful class?

- Information questions generally have one factual answer.
  - How many students are registered in CS4001 this semester?

- To tell the difference: Can a simple gathering of facts answer it?

Group Activity

- In small groups of 2-4, pick one or more of the following questions and decide whether the question is an information question or an issue question:
  - What percentage of public schools in the United States are failing?
  - What is the effect on children of playing first-person-shooter games?
  - Is genetically modified corn safe for human consumption?
  - Should people get rid of their land lines and have only cell phones?

- Hint: Some questions could be either depending on the context! Think of contexts that could make these questions information vs. issue questions

Pseudo-arguments

- Rational arguments require two things:
  - Reasonable participants
  - Shared assumptions that can serve as a starting point

- Lacking either of these, arguments devolve into "pseudo-arguments"

Committed Believers and Fanatical Skeptics

- Committed believers:
  - Have their convictions and will not accept any claims that are inconsistent
  - Russel's teapot

- Fanatic skeptic:
  - Demand definitive proof when no proof is possible (e.g., that the sun will rise tomorrow)
  - Accept nothing short of absolute proof, which is usually impossible

- Both are "unreasonable" in the context of argumentation

Lack of shared assumptions

- Ideology
  - Literal interpretation of the bible vs metaphorical interpretation
  - Lack of shared assumption will lead to an impasse in discussing issues like evolution

- Personal opinions
  - "Nachos are better than pizza because nachos taste better'

Class activity: Which of the following will more likely lead to rational arguments?

- Are the Star Wars films good science fiction?

- Is it ethically justifiable to capture dolphins and train them for human entertainment?

Enthymeme

- An enthymeme is a claim supported by reasons.

- **Claims** answer an issue question
- **Reasons** are claims used to support other claims
  - 'because' clauses make the relationship clear

- "After school jobs are bad for teenagers because they take away study time"

Group Activity

▶ Issue: It is permissible to use racial profiling for airport screening.

▶ Come up with an enthymeme agreeing or disagreeing the statement above.

▶ Remember, an enthymeme consists of a **claim** and a **list of reasons**.

Enthymeme

- Enthymeme's are *incomplete* logical structures
  - Underlying assumptions must be stated to "complete" theme.

- This assumption is called the **warrant.**

Claim	After-school jobs are bad for teenagers
Reason	Because they take away study time
Warrant	Loss of study time is bad

Enthymeme

- Counter-claim: *After school jobs are good for teenagers because they teach responsibility and time management.*

Claim	
Reason	
Warrant	

Enthymeme

- Counter-claim: *After school jobs are good for teenagers because they teach responsibility and time management.*

Claim	After-school jobs are good for teenagers
Reason	Because they teach responsibility and time management
Warrant	Learning responsibility and time management is good

Grounds

▶ Grounds are supporting evidence that causes the audience to support your reason.

Claim	After-school jobs are good for teenagers
Reason	Because they teach responsibility and time management
Warrant	Learning responsibility and time management is good
Grounds	Evidence that teenagers with after-school jobs are more responsible and have better time management

Backing

► Arguments that support the warrant

Claim	After-school jobs are good for teenagers
Reason	Because they teach responsibility and time management
Warrant	Learning responsibility and time management is good
Grounds	Evidence that teenagers with after-school jobs are more responsible and have better time management
Backing	Evidence that more responsible teenagers with better time management skills have better outcomes

Group activity continued

- Issue: It is permissible to use racial profiling for airport screening.

- Add warrants, grounds & backing to the enthymemes from the prevbious activity

Conditions of rebuttal

- To rebut an argument, one can undermine:
  - Reasons and grounds
  - Warrant and backing

Conditions of rebuttal

▶ What are ways to rebut the following argument?

Claim	After-school jobs are good for teenagers
Reason	Because they teach responsibility and time management
Warrant	Learning responsibility and time management is good
Grounds	Evidence that teenagers with after-school jobs are more responsible and have better time management
Backing	Evidence that more responsible teenagers with better time management skills have better outcomes

Audience-based reasons

- Might need to make a different argument to different audiences.

- The Hawks want to build a new stadium and have the city fund part of the construction, but the city denies it.

- Need a different argument to convince:
  - People who object all public funding for sports arenas.
  - People who object to where the arena would be built.

Persuasion != Argumentation

- **Persuasion**: The process of convincing someone to do or believe something.
  - End-goal: convincing others
  - (not necessarily a bad thing)

- **Argumentation**: The process of establishing a claim and then **supporting** it with the use of logical reasoning, examples and research.
  - End-goal: consensus on "truth"