

CS 4001: Computing, Society & Professionalism

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Week 6: Core and Logical Structure
of Arguments
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Elements of an Argument

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

Arguing your side makes you the **proponent**.

Persuasion vs. Argumentation

Persuasion: The action or fact of persuading someone or of being persuaded to do or believe something.

Argumentation: The process of **establishing** a claim and then **proving** it with the use of logical reasoning, examples, and research.

Difference between Persuasive and Argumentative Essay

A persuasive essay

- May make a claim based on opinion
- May not take opposing ideas into account
- Persuades by appealing to the audience's emotion or by relying on the character or credentials of the writer
- Emotion-based

An argumentative essay

- Makes claims based on factual evidence (research)
- Makes counterclaims – takes opposing views into account.
- Neutralizes or “defeats” serious opposing ideas
- Convinces audience through the merit and rationality of the claim and proofs offered
- Logic-based

Arguments and Pseudo-arguments


- Rational arguments degenerate to pseudo-arguments when there is no possibility for listening, learning, growth, or change
- Pseudo-arguments – committed believers and fanatical skeptics
- Lack of shared assumptions
 - The problem of ideology
 - The problem of personal opinions

Discussion Point

- Which one of the following statements will lead to reasonable arguments?
- A: Are the Star Wars films good science fiction?
- B: Is it ethically justifiable to capture dolphins and train them for human entertainment?

Power of Audience-Based Reasons


- Both Aristotle and Toulmin support the need to create “audience-based reasons.”
- Whenever you consider a piece of argumentative writing, you must couple that with the question “who is reading/affected by it?”
- A good reason to you may not be a good reason to others.



Class Exercise 1A: Audience-Based Reasons

Framing for an Audience

- <http://ethicsunwrapped.utexas.edu/video/framing>



Class Exercise 1B: Framing for an Audience

The Role of Assumptions

- Our arguments are not grounded in abstract, catch-all statements.
- Instead, grounded in beliefs, assumptions, or values granted by your audience.
- As long as assumptions are shared, they can remain unstated. If not shared, well, we have an issue.

Terms to know...

- **Claim:** statement to be justified/proven/upheld
- **Reason:** the reasons, support, and evidence to support your claim
- **Warrant:** a stated or unstated belief, rule, or principle that underlies an argument
 - Audience must accept the warrant

Remember...

- Claims are supported with reasons. You can usually state a reason as a “because” clause attached to a claim statement.
- A “because” clause attached to a claim is an incomplete logical structure called an **enthymeme**. To complete the logical structure, the unstated assumptions (warrants) must be articulated.
- To serve as an effective starting point for the argument, this unstated assumption should be a belief, value, or principle that the audience grants or allows (warrant).

Enthymeme

- *After-school jobs are bad for teenagers because they take away study time.*
- Includes a claim with a reason expressed as a “because” clause. To render this enthymeme logically complete, you must supply an unstated assumption or a **warrant**.



CLAIM:

After-school jobs are bad
for teenagers.

REASON:

Because they take away
study time

WARRANT:

Loss of study time is bad.

Alternative Argument

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 time
responsibility and time
management

WARRANT:

Learning responsibility
and time management is
good.



Class Exercise 2: Warrant

Grounds and Backing

- Alright—so we have a logical structure forming.
- An Enthymeme (a claim with a because clause)
- A Warrant (articulating our assumptions)
- That's great!
- But, we need more. Lots more. These are just statements. The BONES of an argument.
- According to Toulmin, we need GROUNDS and BACKING in order to “flesh out” our argument for the masses.

Grounds and Backing

- **Claim:** statement to be justified/proven/upheld
- **Reason:** the reasons, support, and evidence to support your claim
- **Warrant:** a stated or unstated belief, rule, or principle that underlies an argument
 - Audience must accept the warrant
- To give body and weight to our arguments, we also need:
 - **Grounds:** a statement, supporting evidence, facts, data that is established before an argument is begun
 - **Backing:** argument that supports the warrant

Grounds

- Grounds are the supporting evidence—data, facts, statistics, testimony, or examples—that cause you to make your claim. They are collectively all the evidence you use to support a reason.
- Grounds answers the question “How do you know?”

Backing

- Backing is the argument that supports the warrant, or underlying assumption.
- In some cases, successful arguments require just three components: a claim, a reason, and grounds. However, if the audience questions or doubts the warrant, the writer needs to provide support for that argument.

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

- **Grounds:** (jobs take away study time) data/evidence showing that after-school jobs take away study time (e.g., of teenagers who work late and don't study, statistics showing that teenagers with jobs study less than those without jobs, testimony from teachers that working students study less than those with jobs)

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

- **(Backing)**: Argument showing why loss of study time is bad (it leads to lower grades, to inadequate preparation for college, to less enjoyment of school, to lower self-image as a student, etc.)

A Resistant Audience

- Often, a resistant audience will offer REBUTTALS—attacks and counterarguments on your assertions.
- But, these rebuttals are good—they remind us to look at our arguments from the perspective of a skeptic.
- The best writers will plan for them, anticipate them, and counter them before they arise.

ENTHYMEME

CLAIM Cocaine and heroin should be legalized

REASON because legalization would eliminate the black market in drugs.

GROUND

Statistical evidence and arguments showing how legalization would end black market:

- Statistics and data showing the size of the current black market
- Examples, anecdotes, facts showing how the black market works
- Causal explanation showing that selling cocaine and heroin legally in state-controlled stores would lower price and eliminate drug dealers

WARRANT

Eliminating the black market in drugs is good

BACKING

Statistics and examples about the ill effects of the black market

- The high cost of the black market to crime victims
- The high cost to taxpayers of waging the war against drugs
- The high cost of prisons to house incarcerated drug dealers
- Evidence that huge profits make drug dealing more attractive than ordinary jobs

CONDITIONS OF REBUTTAL

Attacking the reason and grounds


- Arguments showing that legalizing cocaine and heroin would not eliminate the black market in drugs
- Perhaps taxes on the drugs would keep the costs above black market prices
- Perhaps new kinds of illegal designer drugs would be developed and sold on the black market

CONDITIONS OF REBUTTAL

Attacking the warrant and backing

Arguments showing that the benefits of eliminating the black market are outweighed by the costs

- The number of new drug users and addicts would be unacceptably high.
- The health and economic cost of treating addiction would be too high.
- The social costs of selling drugs legally in liquor stores would bring harmful change to our cultural values.



Class Exercise 3: Grounds, Backing, and Rebuttals



Rhetorical Structures



ARGUMENTATIVE ESSAY

The argumentative essay
is a genre of writing that requires
you to:

1. investigate a topic;
2. collect, generate, and evaluate evidence; and
3. establish a position on the topic in a concise manner.

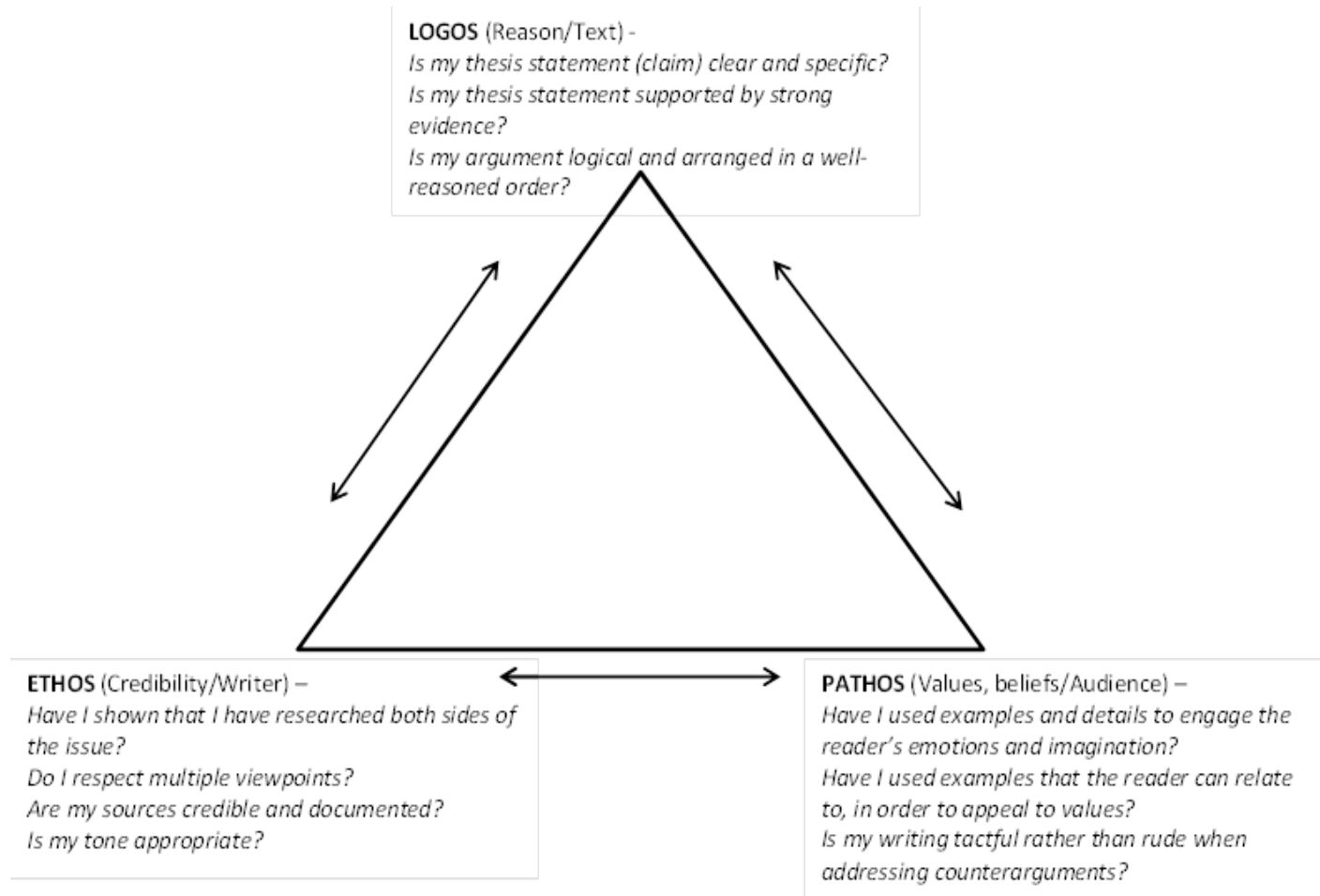


Why is Organization Important in Argument Writing?

- Guides an audience through your reasoning process
- Offers a clear explanation of each argued point
- Demonstrates the credibility of the writer

The Rhetorical Triangle

Don't forget to incorporate elements of ethos, pathos, and logos.



IMPORTANT POINTS TO CONSIDER:

- Effective arguments consider all three points on this triangle. They are interrelated - they help each other.
- All three of the corners of the Rhetorical Triangle overlap. You can do one or all of them in a single paragraph.

In Other Words...

- Ethos: Is it Ethical?
- Pathos: Does it make you feel a strong emotion?
- Logos: Does it make you use your sense of reason?

Ethos

- *Ethos*: Ethics
- To make the audience decide **right or wrong** about what is being presented to it
- Political issues, national beliefs, religious issues, etc...
- Typically has contrasting colors symbolizing the difference between good and evil.

Pathos

- *Pathos*: Emotion
- To make the audience **feel** something about what is presented to it
- Children, animals, illness, memories, etc...
- “Tugs at your heart strings”

Logos

- *Logos*: Logic
- To make the audience **think** about what is presented to it
- Statistics, facts, authorities, etc...
- Very straightforward, and not “fluff”. It has a very scientific, factual approach.



Class Exercise 4: Ethos, Pathos, and Logos

Ethos, Pathos, or Logos?



MICHELIN. BECAUSE SO MUCH IS RIDING ON YOUR TIRES.

At Michelin, we are guided by a single overriding concept: tires are—as far as we are concerned—the most important pieces of equipment you can put on your car.

Therefore, making the best tires possible, regardless of cost, has become an obsession with us.

That is why we make our own steel for our steel-belted radials. Why each tire model is so long in the development stage. And even longer in the testing and manufacturing stages.

That is also why Michelin's performs as well as they perform. And last as long as they last.

And, of course, why they cost more to buy.

Though you may find, as many Michelin buyers do, they end up costing less to own.



MICHELIN



MOBILE RAGE IS THE NEW ROAD RAGE

91%

of Americans say they have seen people misuse mobile tech, with an average of five incidents viewed per day.

Baseline



Ethos, Pathos, Logos?



There are some things you just
can't afford to gamble with.

When you get a cavity, there's no second chance.

That's why it's important that you know that more dentists recommend Crest for fighting cavities than all other toothpastes combined.

It's a point that's made rather

The dentists' choice for fighting cavities.

dramatically when you consider that Crest has prevented 523 million cavities since its introduction in 1955.

There are, of course, no sure things in your battle against cavities. But at least Crest helps put the odds in your favor.



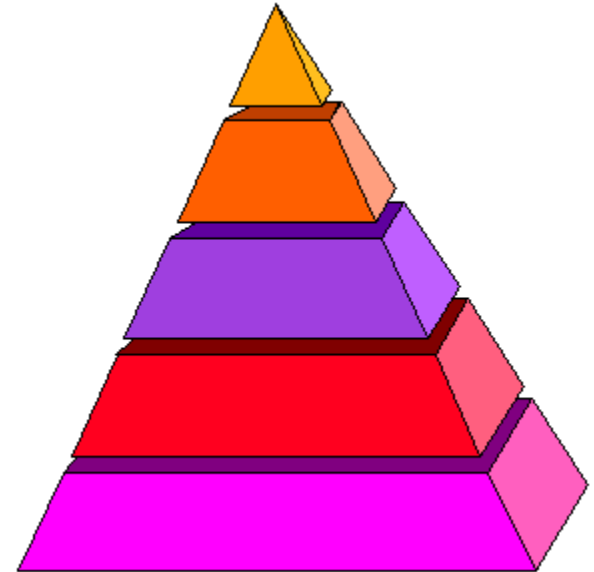
*Crest has been shown to be an effective decay-preventive dentifrice that can be of significant value when used in a conscientiously applied program of oral hygiene and regular professional care. Council on Dental Therapeutics, American Dental Association. © 1987 P&G



Organizing an Argument

Organizing Your Argument

- Title
- Introduction
 - Thesis statement
- Body Paragraphs
 - Constructing Topic Sentences
 - Building Main Points
 - Countering the Opposition
- Conclusion





Title: Why You Need One

- Introduces the topic of discussion to the audience
- Generates reader interest in the argument



Creating a Title

- Try to grab attention by:
 - offering a provocative image
 - picking up on words or examples offered in the body or conclusion of the paper
 - asking a question
- Avoid titles that are too general or lack character



What is an Introduction?

- Acquaints the reader with the topic and purpose of the paper
- Generates the audience's interest in the topic
- Offers a plan for the ensuing argument:
 - Introduction:** Tell them what you're going to tell them
 - Body:** Tell them
 - Conclusion:** Tell them what you told them



Methods for Constructing an Introduction

- personal anecdote
- example-real or hypothetical
- question
- quotation
- shocking statistics
- striking image



What is a Thesis Statement?

- The MOST IMPORTANT SENTENCE in your paper
- Lets the reader know the main idea of the paper
- Answers the question: “What am I trying to prove?”
- Not a factual statement, but a claim that has to be proven throughout the paper



Body Paragraphs and Topic Sentences

- Body paragraphs build upon the claims made in the introductory paragraph(s).
- Organize with the use of topic sentences that illustrate the main idea of each paragraph.
- Offering a brief explanation of the history or recent developments of topic within the early body paragraphs can help the audience to become familiarized with your topic and the complexity of the issue.



Body Paragraphs

- Paragraphs may be ordered in several ways, depending upon the topic and purpose of your argument:
 - General to specific information
 - Most important point to least important point
 - Weakest claim to strongest claim



Offering a Counterargument

- Addressing the claims of the opposition is an important component in building a convincing argument.
- It demonstrates your credibility as a writer – you have researched multiple sides of the argument and have come to an informed decision.
- It shows you have considered other points of view – that other points of view are valid and reasonable.



Effective Counterarguments

- Consider your audience when you address the counterargument.
- Conceding to some of your opposition's concerns can demonstrate respect for their opinions.
- Remain tactful yet firm.
 - Using rude or deprecating language can cause your audience to reject your position without carefully considering your claims.



Placement of a Counterargument

- Counterarguments may be located at various locations within your body paragraphs.
- You may choose to:
 - build each of your main points as a contrast to oppositional claims.
 - offer a counterargument after you have articulated your main claims.



Research in Body Paragraphs

- Researched material can aid you in proving the claims of your argument and disproving oppositional claims.
- Be sure to use your research to support the claims made in your topic sentences – make your research work to prove your argument.



Conclusion

- Your conclusion should reemphasize the main points made in your paper.
- You may choose to reiterate a call to action or speculate on the future of your topic, when appropriate.
- Avoid raising new claims in your conclusion.

Introduction: Tell them what you're going to tell them

Body: Tell them

Conclusion: Tell them what you told them