CS 4873: Computing, Society & Professionalism

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Week 2: Rhetoric & Writing Arguments

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Slides adapted from Sauvik Das, Munmun de Choudhury, and Amy Bruckman

Term Paper (and Homeworks)

- Term Paper
  - Most important single assignment in this class.
  - Worth 25% of your grade by itself (35% including related assignments).
- For the term paper you'll be:
  - Researching an issue about computing and society on which you are initially undecided
  - Taking a position based on your research
  - Writing an argument to support that position

- Homeworks
  - Shorter writing assignments, 15% of your grade
  - Also writing arguments
    - Don't really need the full structures discussed here

- This is a quick primer on writing arguments!

What's in an argument?

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

- **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"

Issue questions and Information questions

- Issue questions are the origin or arguments: Can usually be reasonably answered in multiple different ways.
  - Is CS4873 an interesting and useful class?

- Information questions generally have one factual answer.
  - How many students are registered in CS4873 this semester?

- To tell the difference:
  - What's your purpose in relation with the audience?
    - Teacher? Probably information question
    - Advocate / decision maker? Probably issue question
  - Can a simple gathering of facts answer it?
  - Sometimes contextually dependent
    - e.g., is encryption effective?

Issue or Information Q:

- 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?

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"

Unreasonable participants: Committed Believers and Fanatical Skeptics

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

- Fanatical 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"

Which of the following will more likely lead to rational arguments? Why?

- Are the Star Wars films good science fiction?

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

Rhetoric 101

The rhetorical triangle

- **Logos**: appeal from logic
  - e.g., You could protect yourself from 97% of malware by keeping your computer up-to-date.

- **Ethos**: appeal from character, authority, credibility
  - e.g., Trust me, I have a Ph.D. in cybersecurity.

- **Pathos**: appeal from emotion, audience's sympathy
  - e.g., Sue did not update her computer, and now has to pay someone 500,000 USD in Bitcoin to unlock the only photos she has remaining of her late grandson.

The Rhetorical...Rectangle?

- **Kairos**: appeal from opportunity / timing. Saying the right thing at the right time.
    - e.g., Russian cybercrime units targeted U.S. citizens with malware to facilitate DDoS attacks on core U.S. infrastructure ahead of the 2020 election.

- What are examples of an argument that has Kairos right now?

- What are examples of an argument that does not have Kairos right now?

Rhetorical tools

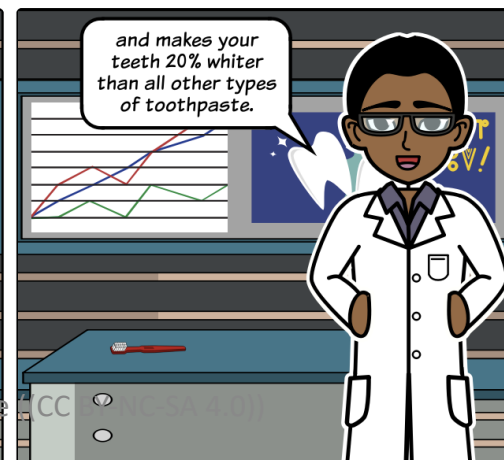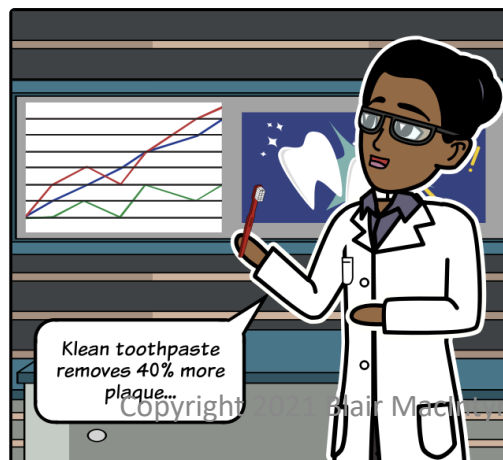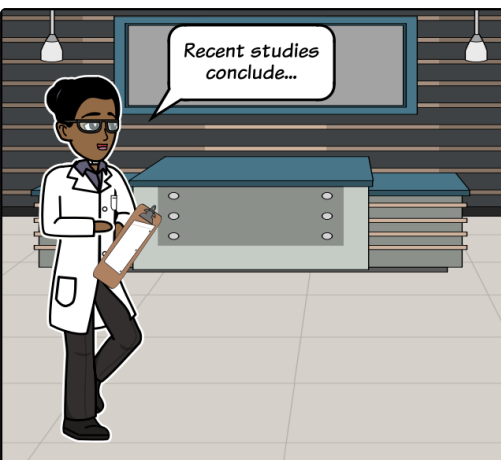- Logos: appeals to logic

- Ethos: appeals to authority

- Pathos: appeals to emotion

- Kairos: timeliness

- Pick tools that are most convincing to your target audience
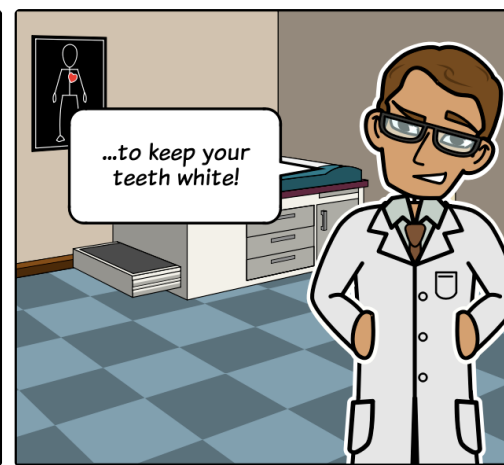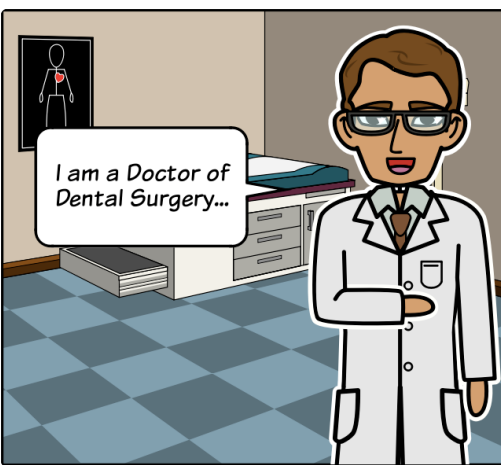
Ethos appeals to:
Intelligence
Virtue
Morals
Perception of trustworthiness
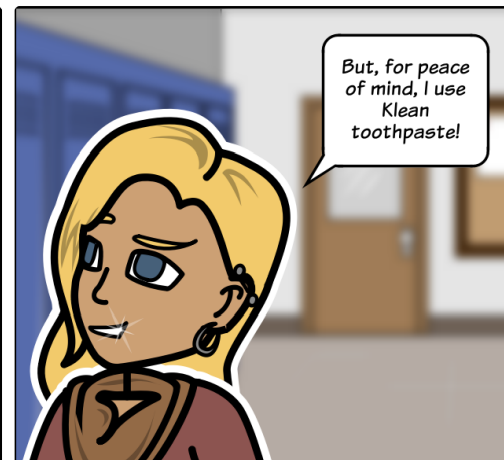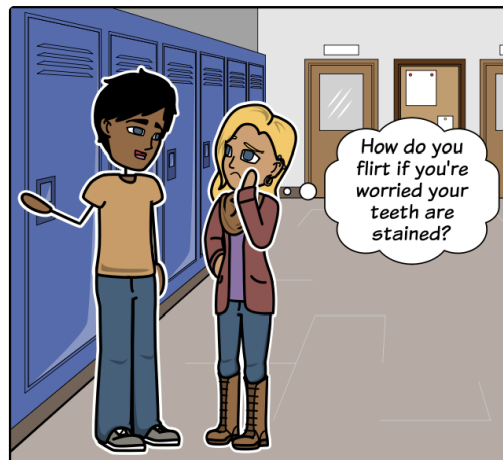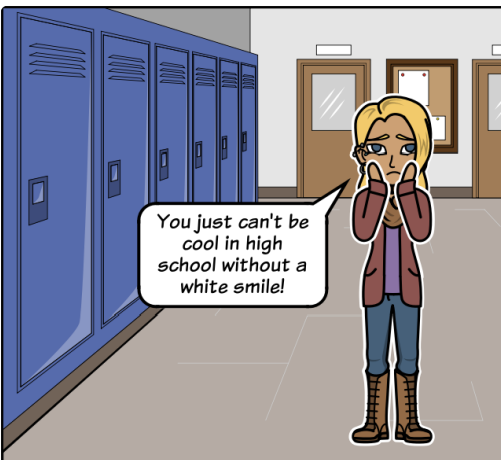
Pathos appeals to:
Emotions
Biases/prejudices
Senses
Motivations

Logos utilizes:
Evidence
Testimony
Statistics and Data
Universal truths

Writing arguments

Writing Arguments

- The argumentative essay is a genre of writing that requires you to:
  - Investigate a topic;
  - Collect, generate and evaluate evidence; and,
  - Establish a position on the topic in a concise manner.

- You're going to be writing an argumentative essay for your term paper!

- Different types of argument structures.

Classical Arguments

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

- Structure:
  - Exordium / Narratio: Introduction & Background
  - Proposito: Presentation of writer's position
  - Confirmatio: Summary of opposing views
  - Refutatio: Response to opposing views
  - Peroratio: Conclusion

Introduction

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

- **Structure**:
  - Attention grabber (e.g., a memorable scene, illustrative story, remarkable stat)
  - Explanation of issue and needed background (e.g., question)
  - Thesis (i.e., main claim)
  - Forecasting (i.e., outline rest of essay)

- *"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
  - Can either by one-by-one or all together

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"*

Classical argument

- Appeals to neutral or undecided audience
- Summarize opposing views fairly

- Principle of charity
  - Avoid distorting or oversimplifying opposing views
  - Don't strawman

- Once you summarize opposing views, either rebut or concede

Not the only way to do it

- Classical arguments are effective but they may not always the most persuasive.

Delayed-thesis argument

- Audience: Skeptical with limited knowledge of issue

- Complicates the issue (instead of simplifying). Heightens reader interest and sympathy.

- Intro

- Dialogic discussion
  - Explores issue from multiple viewpoints
  - Delayed thesis and support

- Conclusion

Adversarial vs Dialogic

- In adversarial, writer presents other side as flawed
  - Typical argument you see in politics

- Dialogic is more neutral – "truth seeking"
  - Enlists reader as a partner in truth seeking
  - Encourage sympathy for
    more than one point of view

Rogerian argument

- Audience: Interested and resistant

- Show that writer and resistant audience share many values
- Wait until the end to express a view that is usually a compromise between the writer's original view and the resistant audience

- Especially effective in emotionally laden issues
- Must understand audience POV
- Stresses self-examination, clarification and accommodation rather than refutation

Rogerian argument structure

- Intro

- Summary of audience's views

- Common ground

- Contribution of new points to the negotiation

- Conclusion

Choose structure based on your audience

- Who is your audience?

- How much does your audience know or care about your issue?

- What is your audience's current attitude towards the issue?

- What will be your audience's likely objections?

- What values, beliefs, or assumptions about the world do you and your audience share?

Toulmin method for constructing claims

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"

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

Conditions of rebuttal

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

Evidence

What is evidence?

- All the verifiable information a writer might use as support for their argument.

- Part of the "grounds" and "backing" of an argument in support of reasons and warrant.

- Many different types of evidence…
  what are examples?

Persuasive Use of Evidence

- Apply the STAR Criteria (by Richard Fulkerson)
    - **S**ufficiency: Is there enough evidence?
    - **T**ypicality: Is the chosen evidence representative and typical?
    - **A**ccuracy: Is the evidence accurate and up to date?
    - **R**elevance: Is the evidence relevant to the claim?

Sources

- Use sources your audience can trust
  - Take into account, for example, the political leanings of the source
  - Level of review to have something published

- Very different review process for different publications
  - Journalism
  - Book chapters
  - Refereed journal articles
  - Conference papers
    - Refereed
    - Non-refereed

Types of Evidence

- Examples from personal experience or knowledge
- Personal observation or field research
- Interviews, questionnaires & surveys
- Data from reading and extant research
- Testimony
- Statistical data
- Hypothetical examples, cases and scenarios

Personal experience

- "Despite the recent criticism that Ritalin is overprescribed for ADHD, it can often seem like a miracle drug. My little brother is a perfect example, before he was given the drug, he was a terror in school…"

- Strengths?

- Limitations?

Observation / field research

- "The intersection at Fifth and Montgomery is particularly dangerous because pedestrians almost never find a comfortable break in the heavy flow of cars. On April 29, I watched 57 pedestrians cross the street. Not once did cars stop in both directions before the pedestrian stepped off the sidewalk onto the street… (continue with observed data about danger)"

- Strengths?

- Limitations?

Interviews / questionnaires

- "Another reason to ban laptops from classroom is the extent to which laptop users disturb other students. In a questionnaire that I distributed to 50 students in my residence hall, a surprising 60% said that they were annoyed by fellow student' sending email, paying their bills or surfing the web, while pretending to take notes in class. Additionally, I interviewed 5 students who gave me specific examples of how these distractions interfere with learning…"

- Strengths?

- Limitations?

Testimony

- "Although the Swedish economist Bjorn Lomborg claims that acid rain is not a significant problem, many environmentalists disagree. According to David Bellamany, president of the Conservation Foundation, "Acid rain does kill forests and people around the world, and it is still going so in the most polluted places, such as Russia" (qtd. In BBC News)"

- Strengths?

- Limitations?

Statistics

- "Americans are delaying marriage at a surprising rate. In 1970, 85% of Americans between the ages of 25-29 years were married. In 2010, however, only 45% were married (A. Source)."

- Strengths?

- Limitations?