Critical Thinking

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Course description

This is a course covers informal reasoning and argumentation. Nearly every course you take at a university level involves the skills taught in this class. Academic texts primarily set out to make arguments for non-obvious conclusions, and the ability to evaluate these arguments is central both to your development as a student as well as to cultivating your intellectual autonomy (thinking for oneself, independently gather evidence, etc.). In this course, we will examine what an argument is, the different kinds of arguments, what makes an argument good or bad, how to evaluate and standardize arguments, and common fallacious forms of arguments that pervade political, popular, and even academic discourse. Students taking this class should become closer and more readers of academic arguments, and should sharpen their skills of rational persuasion.

Required texts

We will use *Critical Thinking: The Art of Argument*, by George Rainbolt and Sandra Dwyer. Make sure you get a copy of the second edition of the book, published in 2014. I will also periodically assign supplementary texts, which will be available on the course website.

Assignments

You will be expected to complete the following assignments:

- One short writing assignment, due at the end of week 3. This is intended to

diagnose your writing and offer the opportunity for you to get early feedback.

- One longer written assignment in which you standardize and defend an argument. (More details tbd)
- Two non-cumulative exams, one at the mid-point of the semester and the other during the final exam period.
- One brief in-class debate, which will be conducted in weeks 7-9.
- Argument standardization assignments
- In-class participation and short reading quizzes.

Grade breakdown

Short writing assignment	10%
Longer writing assignment	20%
Exam 1	20%
Exam 2	20%
Debate	10%
Argument standardization exercises	10%
Participation (quizzess, in-class discussion, etc.)	10%

Email policy

I will make course announcements primarily via email. If you need to contact me, please email me from your university account. Do not try to message me on Canvas [or any other online learning platform], as I may not see it.

I will aim to reply to student emails within 48 hours of receiving them. If you email me and do no recieve a reply within that period, please resend the email.

Extension policy

I may, at my discretion, grant extensions for assignments to students who ask for them, consistent with any relevant university policies. If you need an extension, email me at least 48 hours before the assignment is due. I may not respond to extension requests after that point. If I don't respond to your extension request, you're responsible for turning the assignment in on time.

Norms of respectful discourse

Since classroom discussion is a significant part of this class, you are expected to observe norms of respectful discussion. Your participation grade in class will be partially based on the extent to which you are a constructive and respectful participant.

Please read David Chalmers' summary of respectful discourse norms, available here: http://consc.net/guidelines/. Chalmers' list is intended for talks at academic conferences, where a speaker gives a prepared talk, followed by a moderated question and answer session. Since we won't normally have designated speakers or Q&A periods, some of Chalmers' guidelines won't be applicable to our class. But most will be.

Here are some norms I'd like to emphasize:

- Don't interrupt others.
- Don't use disrespectful body language (e.g.: don't roll your eyes or sigh loudly when people bring up points).
- Don't dominate conversation. If you've made several points, let others talk. If you're focused on an issue and the rest of the class seems ready to move on, consider dropping it or bringing it up in private with me or your fellow students.
- Don't be dismissive toward the comments of others. Instead of saying things like "that's crazy" or "your argument is logically absurd," consider saying things like: "But isn't this point a problem for that view?"
- Don't single people out on the basis of their race, nationality, gender, sexual orientation, or linguistic community.
- Avoid potentially offensive examples unless necessary to make cogent, on-topic points. Even in the course of making cogent, on-topic points, use discretion about sensitive matters that may reasonable offend someone. If you have a question about what this means, ask me.
- Listen to others and acknowledge what they have to say. If you make a point that's similar to what someone else has said, give them credit. (It's fine to point out if you think your point is slightly different, too.)
- If someone breaches a norm of respect, be polite about pointing it out to them. If it's still a problem, let me know. If someone tells you that you've behaved disrespectfully, don't dismiss what they say. At least consider the possibility that they may be right.

Academic honesty

If you *copy* text from another source, you must indicate that it is a quotation (by using quotation marks or by offsetting it as a block quote) and provide a citation for the source.

If you *paraphrase* text from another source (i.e, you summarize a passage or argument in your own words), you must provide a citation for the source.

If you *use an idea that someone else came up with*, you must provide a citation to credit them. This includes ideas others mention to you in personal conversation. For instance, if your friend Betty reads a draft of your paper and makes an objection you decide to respond to in the final version, you should write something like "I am indebted to Betty Jenkins for pressing me on this point" in a footnote.

If you fail to comply with the three above requirements, or if you're caught cheating on an in-class assignment, I may refer the incident to the university's disciplinary body. This could result in the university sanctioning you. (Consult relevant university policy regarding what constitutes cheating.)

You should also cite controversial or not-widely-known claims in your paper if you make them. Most claims based on recent academic research are either controversial, not widely known, or both. You don't need to cite uncontroversial, widely-known claims.

University policies

[Paste university-wide policies here.]

Schedule

Week 1: What is an argument?

- Not just a dispute
- Difficulty in defining (so that bad arguments still count as arguments)
- Propositions as the meanings of sentences
- Premises and conclusions
- Contrast with explanations
- Logical strength
- "That's your opinion" and "well, that's not true for me"
- *Readings:*
  - *Critical Thinking*, chapter 1

Week 2: What is a *good* argument?

- Standardizing arguments
- Three basic types of argument
- Deductive arguments: validity and soundness
- Ampliative arguments: strength and support
- Two tests for all arguments: the true premises test and the proper form test
- Basic types of premises
- Evaluating premises
- *Readings:*
  - *Critical Thinking*, chapters 2 (all) and 3 (only pp. 87-101, omitting the gray text)

Week 3: Deductive arguments

- Identifying deductive arguments
- The importance of not identifying *everything* as a deductive argument

- Identifying valid deductive arguments
- The imagination test
- Common forms of valid arguments: *modus ponens*, *modus tollens*, valid syllogisms, etc.
- The logical connectives
- Identifying logical connectives in everyday language
- The importance of not mixing up validity with certainty
- *Readings:*
  - *Critical Thinking*, chapter 5

Week 4: Inductive arguments

- Not any worse than deductive arguments!
- Strength versus validity
- Assessing the strength of statistical arguments
- Probability versus likelihood
- Probability: two interpretations
- *Readings:*
  - selections from David Hume, *An Enquiry Concerning the Human Understanding*

Week 5: Analogical arguments (a type of inductive argument)

- Analogies versus analogical arguments
- The basic form of analogical arguments
- Similarity versus relevant similarity
- What counts as a relevant similarity?
- The identity of indiscernibles
- Are all inductive arguments really analogical arguments?
- Scientific models

- *Readings:*
  - *Critical Thinking*, chapter 7
  - selections from David Hume, *Dialogues Concerning Natural Religion*

Week 6: Lies, damned lies, and statistical arguments (another type of inductive argument)

- Descriptive statistics
- Deductive interpretations of statistical arguments
- The problem of projection
- Evaluating statistical premises
- The Paradox of the Ravens
- *Readings:*
  - *Critical Thinking*, chapter 8
  - selections from Nelson Goodman, *Fact, Fiction, and Forecast*.

Week 7: Arguments to the best explanation

- Is this a real kind of argument? I thought explanations weren't arguments!
- Scientific explanations
- What makes an explanation better or worse?
- *Readings:*
  - selections from Elliott Sober, *Core Questions of Philosophy*
  - selections from William Paley, *Natural Theology*

Week 8: Causal arguments (a type of argument to the best explanation)

- What do we mean when we say something caused something else?
- Subjunctive premises
- Counterfactual interpretation of causation
- Mill's methods
- Arguing about *the* cause: INUS conditions

- *Readings:*
  - *Critical Thinking*, chapter 9
  - selections J. L. Mackie, "Causes and Conditions"

Week 9: Functional arguments (another type of argument to the best explanation)

- Genuinely functional arguments are controversial
- Functional arguments in biology
- Functional arguments in the social sciences
- Tensions with methodological individualism in the social sciences
- *Readings:*
  - *Critical Thinking*, chapter 9
  - selections G. A. Cohen, "Functional Explanation, Consequence Explanation, and Marxism,"
  - selections from Donald Davidson, "Actions, Reasons, and Causes"

Week 10: Moral arguments

- How to identify moral arguments
- Premises about values
- The truth of claims about value
- Moral relativism
- Thought experiments
- How to identify the morally relevant features of a case or example
- *Readings:*
  - *Critical Thinking*, chapter 10
  - selections from Ruth Benedict, "A Defense of Ethical Relativism," James Rachels, "The Challenge of Cultural Relativism"

Week 11: Now learn to argue badly: the fallacies

- Formal versus informal fallacies

- Identifying informal fallacies
- The overall rational persuasiveness of an argument
- The many logical fallacies that have been identified
- Logical strength revisited: why don't all valid deductive arguments beg the question?
- Is the slippery slope fallacy a fallacy?
- *Readings:*
  - "The Logical Fallacies," in *The Stanford Encyclopedia of Philosophy*
  - selections from Eugene Volokh, "The Mechanisms of the Slippery Slope," David Enoch, "Once You Start Using Slippery Slope Arguments, You're on a Very Slippery Slope"

Week 12: Sentential logic

- Simple versus compound propositions
- Who need simple propositions when you've got symbols?
- Symbolizing logical connectives
- Valid inferences in symbolic logic
- Proofs versus tests of validity
- *Readings:*
  - selections from Warren Goldfarb, *Deductive Logic*

Week 13: "All," "some," "...is the sibling of...," "...loves...," and "...is better than...": Quantification and relation

- "All" and "some" as quantifiers
- Generic claims (and their role in arguments)
- Venn diagrams as an interpretation of quantification
- Relations and their relata
- The formal properties of various relations: transitivity, symmetry, reflexivity, etc.
- How would you use this in reasoning?

- *Readings:*
  - more selections from Warren Goldfarb, *Deductive Logic*