By now, you should have read all of Chapter 2 (carefully!). And, you should have started your reading of chapter 3 as well.

HW #1 returned today (last 5 mins).
• Solutions posted — more on this below (study them!).

HW #2 has been posted. Don’t wait ‘til last minute!

Our first quiz is Thursday. More on this below, too.

I’ve posted a handout on “3 Causes of Irrational Belief”.

Today: finishing-up Chapter 2, and starting Chapter 3
• Rationality, Relativity, and Objectivity
• Chapter 3 — Well-Formed Arguments

Quiz #1 — Some Remarks
• Our first quiz in on Thursday (in class — last 30 minutes).

You will need to bring (i) a writing implement, and (ii) several blank pages of paper on which to write your short answers.

The quiz will have two sorts of questions:
1. Fill-in-the-blank questions involving vocabulary from chapters 1 & 2 of the text.
2. Short answer questions from chapters 1 & 2 of the text.

The fill-in-the-blank questions will be answered on the quiz sheet itself. Short answers will be written on separate paper.

If you have read the first two chapters of the text (well), followed my lectures, and also worked the exercises in the text, then you should have no problem with the quizzes (generally).

HW #1 — Solutions & Discussion
• I have posted my (“ideal”) solutions to HW #1. Comments:
  • Study my solutions carefully! Only come to me with questions about HW’s after you have studied my solutions.
  • I graded this first HW leniently. As the semester progresses, I will expect more from your HW’s (and quizzes).
  • Please type-up your solutions to future HW’s.
    • (1) The main point of this exercise was to illustrate that one must be careful & clear about what an author’s argument is.
      • Also, literary aspects of the passage are irrelevant here.
    • (2) The rhetorical power of an argumentative passage is audience relative. The rational strength of an argument is not.
    • (3) The literary merit of a passage is not at all relevant to the rational strength of the argument(s) it contains.
    • (4) Impediments to “arguing”, etc., are not relevant here. We are only concerned with impediments to reasoning.
    • (5) Goals vs means/methods of rational argument analysis.

One more announcement…

Participate in experiments & earn cash!

We are a Rutgers University research group looking for undergraduates 18 or older to participate in studies on decision-making. The studies take place on College Avenue Campus in Scott Hall (Room 107). You receive a $5 show-up payment, plus an additional payment that depends on the details of the particular experiment. You are paid cash at the end.

If you would like to register to be contacted about experiments, please go to the following website to register:

http://rutgers-econ.sona-systems.com
Rational Belief XXVI

- **Rationality, Relativity, and Objectivity**
  - The truth of a person’s belief is not relative — that is, a proposition/belief can’t have one truth-value for one person, and a different truth-value for another person.

- But, the rationality of a belief can vary from person to person, because different people can have different evidence.

Example 2.6
You are on a jury hearing the case of Heza Thief, who is accused of robbing a bank. The evidence presented against Thief isn’t very convincing. One witness tentatively identifies him as the robber but admits under cross-examination that he didn’t get a very good look at the robber. Other seemingly honest witnesses report that Thief was with them at the time of the robbery, thus providing him with an alibi. No fingerprints, suspicious financial dealings, or past record is brought up to indicate his guilt. In fact, however, Thief is guilty. His witnesses were paid off to support his alibi and the police have done a bad job investigating this case.

Rational Belief XXVII

- **Rationality, Relativity, and Objectivity**
  - Consider the following proposition:
    - Heza Thief robbed the bank.

  - In this case, your evidence does not support this proposition. So, it is not rational for you to believe it.

  - But, consider whether it would be rational for Heza himself to believe this proposition. Suppose he vividly and clearly remembers robbing the bank, etc.

  - Here, it is rational for Heza to believe that he robbed the bank, while it is not rational for you to believe this.

  - In this sense, rationality is relative to the total evidence available.

Rational Belief XXVIII

- **Rationality, Relativity, and Objectivity**
  - Remember back to our example of the proposition:
    - The earth is flat.

  - At one time, almost everybody believed that this proposition was true. Nowadays, almost nobody believes this.

  - While the claim is (in fact) false, this does not prevent both sets of beliefs from being rational. This is because:
    - The evidence available at that time supported the claim that the earth was flat. But, since then, we have obtained new evidence which overturns that verdict, and supports the falsity of the claim. So, both sets of beliefs are rational.

Rational Belief XXIX

- **Rationality, Relativity, and Objectivity**
  - It is important to note, however, that it is not “up to us” what our total evidence is, or what it supports.

  - We can be wrong about what our total evidence is, and we can also be wrong about what it supports.
    - See my handout on “3 causes of irrational belief”.

  - So, while the rationality of S’s beliefs is relative to the total evidence S has and what that evidence supports. This does not depend on what S thinks about her evidence. Contrast:
    - S’s total evidence (in fact) supports p.
    - S believes that his total evidence supports p.

  - These two claims are distinct, and must not be conflated.
Three Chapter 2 Questions for Discussion

*3. Discuss the following objection to principle (RB). A person who is shipwrecked on a deserted island has a much better chance of surviving if he believes that he will be rescued than if he doesn’t. The belief will give him the strength and motivation to do what he must to stay alive, and this will give him a better chance of living until help arrives. As a result, it surely is rational for him to believe that he will survive, even if he doesn’t have any evidence supporting that belief. So (RB) is wrong.

*5. Discuss the following objection to (BP).

I know that I like peach pie, I don’t merely believe that I like it. Thus, the proposition “I like peach pie” is one that I neither believe nor disbelieve nor suspend judgment about. So it is an exception to (BP).

*5. Does the truth value of this proposition depend on what people think about the topic? Nearly everybody believes that the earth is round.

Chapter 3: Well-Formed Arguments II

- The Standard Form Representation of Arguments
  1. First premise
  2. Second premise
  3. Third premise
  4. Conclusion

- Note: there can be any number of premises in an argument.

- 4 main reasons for putting arguments in standard form:
  1. Placing the argument in standard form allows us to eliminate irrelevant or redundant statements from the argument. Such irrelevancies and redundancies become more salient, once we get in the habit of working in standard form.

Chapter 3: Well-Formed Arguments III

- The Standard Form Representation of Arguments
  1. Sometimes authors of argumentative passages omit certain assumptions/premises. We must make all premises/assumptions explicit in our reconstructions. By placing arguments in standard form, it will be easier for us to spot such missing material.

  2. Sometimes authors of passages will use obscure, misleading, or imprecise language. Rewriting arguments in standard form also involves making all language clear and precise. We must be clear about which propositions are in the argument.

  3. Once we have an argument written out in clear, precise, standard form, we can then easily refer to the various premises (and the conclusion) of the argument via their number labels.
Chapter 3: Well-Formed Arguments IV

- **The Steps of Argument Analysis**
  - Remember, there are two main steps of argument analysis:
  - (1) **Reconstruction**. This involves transforming the argument(s) expressed in the passage into standard form.
  - (2) **Evaluation**. Determining the degree to which the premises of the reconstructed argument support its conclusion.

  - It may seem like (1) and (2) are performed (neatly) in order. Actually, the process involves feedback between (1) and (2).
  - Our goal is to extract the best argument we can from an argumentative passage (we'll return to this in Ch. 5).

  - As a result, we'll need to be thinking hard about step (2) while we are trying to accomplish step (1).

Chapter 3: Well-Formed Arguments V

- **Evaluating Arguments: An Introduction**
  - Because step (2) is so central to obtaining good (and charitable) reconstructions of arguments, we'll actually need to say something about evaluation before getting into reconstruction.

  - To this end, consider the following (brief) example.

**Example 3.1**
Legal Eyes is in favor of legalizing possession and use of drugs. He reasons, “Drugs should be legal. After all, those who use drugs harm only themselves.”

- What is the conclusion of this (brief) argument?
- What are its premises?

Chapter 3: Well-Formed Arguments VI

- **Evaluating Arguments: An Introduction**
  - As a first pass, this argument has the following standard form:

  1. Drugs only hurt those who use them.
  2. (Therefore,) Drugs should be legal.

  - In order to evaluate the strength of this argument, we need (first) to forget our own attitude(s) toward the conclusion.

  - What we’re after is an assessment of the strength of **this particular argument** for the legalization of drugs.

  - It doesn’t matter what other arguments there may or may not be for (or against) this conclusion. They are irrelevant to the assessment of the strength of this argument.

Chapter 3: Well-Formed Arguments VII

- **Evaluating Arguments: An Introduction**
  - There are **only two** sorts of questions that are relevant regarding the assessment of the strength of an argument.

  - Are the premises of the argument true?
  - Is the conclusion supported by the premises (if true)?

  - That is, there are **only two** legitimate ways to criticize an argument (i.e., to try to show it is not as strong is it could be).

  - Show that some of the premises are false.
  - Show that the conclusion is not supported by the premises.
  - Note: reasons to think the conclusion is false are irrelevant!

  - Let’s now return to our (simple) example of the 1-premise argument for the conclusion that drugs should be legal.
Chapter 3: Well-Formed Arguments

- Evaluating Arguments: An Introduction

Critic 1: It is true that drugs hurt only those who use them. But this does not show that they should be legal. Sometimes people have to be protected from their own foolishness and mistakes. This may be a case in which it’s the job of the government to make it harder for people to harm themselves.

- Which of the two sorts of (potentially relevant) criticisms is this?

Critic 2: If it were true that drugs hurt only those who use them, then I’d accept your argument. But it is not true. When pregnant women use drugs, they hurt their unborn children. When parents use them, they often become less responsible and caring parents and so they hurt their children. Some people who use drugs become violent and harm their spouses or others with whom they come into contact. So, drugs don’t hurt only drug users.

- Which of the two sorts of (potentially relevant) criticisms is this?

Chapter 3: Well-Formed Arguments IX

- Evaluating Arguments: An Introduction

Critic 1 believes the premise of the argument, but disbelieves that the premise supports the conclusion (even if it were true).

Critic 2 believes that the premise of the argument supports its conclusion (if true), but disbelieves that the premise is true.

Each critic provides an argument against the claim they disbelieve, but no argument for the claims they believe (i.e., they only give arguments for their criticisms of the argument).

Note how carefully analyzing one argument (A) can ultimately involve analyzing many arguments that pertain to the two considerations that are relevant to the strength of argument (A). [This is one reason why argument analysis is subtle.]

Chapter 3: Well-Formed Arguments X

- Evaluating Arguments: An Introduction

Here are two more introductory examples to discuss...

Example 3.2

Connie and Diane are discussing the recent student elections. They want to know whether Boris voted. Connie reasons as follows: “Boris is a responsible student. So he must have voted.” Diane replies, “I agree with you about Boris’s being responsible, but it just doesn’t follow that he voted. He might have been sick or out of town or too busy. We can’t conclude that he voted.”

Example 3.3

Daniel and Anders are wondering how cold it is outside. Daniel looks outside and sees that the water on a nearby pond is frozen. He then argues: “The water in that pond is frozen. Water freezes at 0 degrees Fahrenheit. So it must be 0 degrees Fahrenheit or lower outside.” Anders might reply, “That would be a good argument if you were right about the freezing point of water, but water freezes at 32 degrees Fahrenheit, not 0 degrees Fahrenheit.”

Chapter 3: Well-Formed Arguments XI

- Well-Formed Arguments

If the conclusion of an argument follows from its premises (i.e., if the conclusion would be supported by the premises if the they were true), then we say that the argument is well-formed.

An argument’s being well-formed involves a logical relation between the premises and conclusion of the argument.

There are two types of well-formed arguments:

- Valid arguments. These are arguments such that the truth of their premises guarantees the truth of their conclusion.

- Cogent arguments. These are such that the truth of their premises makes the truth of their conclusion probable (but does not guarantee the truth of their conclusion).
Chapter 3: Well-Formed Arguments XII

• **Well-Formed Arguments**
  • We will study valid arguments first, and (merely) cogent arguments later. Valid arguments are easier to characterize.

  • Here is a preliminary definition of validity:

    • D3.1: An argument is valid (aka deductively valid) if and only if (iff) it is (logically) impossible for all the premises of the argument to be true while the conclusion of the argument is false.

  • In order to properly understand the meaning of this definition, we need to say what “logically impossible” means.

  • To say that a statement is logically impossible is to say something stronger than that it is (merely) physically impossible (or even mathematically impossible). Here are some examples…

Chapter 3: Well-Formed Arguments XIII

• **Well-Formed Arguments**
  • Some propositions are actually true (Snow is white), and some are not (Al Gore is President of the United States in 2007).

  • Other propositions are not actually true, but still possibly true.
    • Al Gore is not actually our President in 2007, but he might have been—it is possibly true that Al Gore is President in 2007.

  • Some propositions are not even possibly true. For instance:
    • (1) My car has traveled faster than the speed of light.
    • (2) $2 + 2 = 5$.
    • (3) Branden weighs 200lbs and Branden does not weigh 200lbs.

    • (1) violates the laws of physics: it is physically impossible. (2) violates the laws of arithmetic: it is arithmetically impossible.
    ➞ (3) violates the laws of logic: it is logically impossible.