Philosophy 101
(4/26/11)

- **HW #6 will be returned on Thursday**

- **Our final quiz will be on Thursday as well**
  - **This will involve several questions about argument reconstructions.**

- *Take-home final*: **TBA on 4/28. To be due 5/12.**
  - **+ More extra-credit (TBA on 4/28; TBD on 5/12)**
  - **+ You can turn-in *all/any* extra-credit on 5/12**

- **I will hold office hours next week at these times:**
  - **3-4pm on Monday 5/2**
  - **1-2pm on Wed. 5/4**

- **Today: an overview of the course**
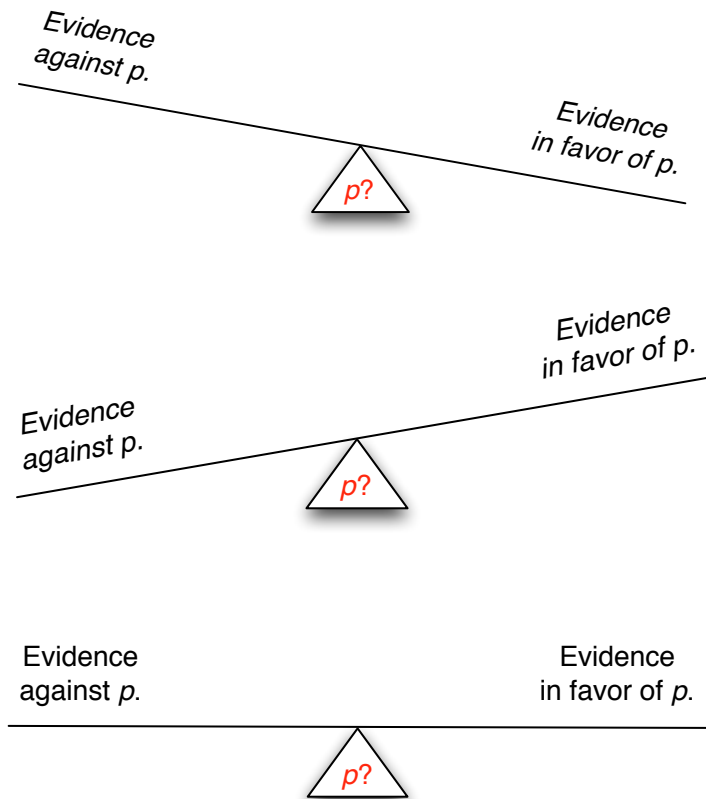
Course Overview I

- **Arguments** are collections of **propositions**.
- Propositions are expressed by (but distinct from) **sentences**.
  - *Not all sentences express propositions* ("What time is it?").
  - Not even all *declarative* sentences express propositions!
    - "This sentence is false".
    - "John is bald". [if "bald" is *vague*]
  - Different sentences can express the same proposition:
    - "Le singe est sur la branche."
    - "The monkey is on the branch."
- Propositions are *either* **true** or **false**, *but not both*.
- Propositions are the objects of belief/thought.
- The **premises** of an argument are meant to *support, or provide good reasons to believe* the **conclusion** of the argument.

Course Overview II

- A proposition is true *iff* it **corresponds to the facts**, otherwise the proposition is false. And, this is an *objective* matter.
- Because truth is a matter of correspondence with the facts, it does not depend on evidence (or what anyone thinks).
- This *doesn't* mean that psychological facts are never involved in determining that any propositions are true (or false). Example:
  - (*p*) Branden believes it will rain tomorrow.
- This proposition *p* is true *because of certain psychological facts* (*about me*). But, I *can't* "make *p* true" just by believing *p*. Why?
- Because the truth of *p* does not depend on whether I believe *p* — it depends on whether I believe *a different proposition* (*q*).
- If, *in fact*, I believe *q*, then *p* is true. What about the following?
  - (*r*) Branden believes that *r* is true.

Course Overview III

- If you think that a proposition *p* is *more probable than not*, then you **believe** *p*. If you think *p* is *less probable than not*, then you **disbelieve** *p*. Otherwise, you **suspend judgment** on *p*.
- If **your evidence supports** *p* (*justifies* thinking *p* is *more probable than not*), then it is **reasonable for you to believe** *p*.
- If your evidence **counter-supports** *p* (*justifies* "*p* is *less probable than not*"), then it is **reasonable for you to disbelieve** *p*.
- Otherwise, it is **reasonable for you to suspend** on *p*.
- People with different evidence can be reasonable in believing different things (*e.g.*, "the earth is flat" — us *vs* our ancestors).
- So, *what is reasonable to believe is relative to one's evidence* — *despite* the fact that *truth* is **not** relative to evidence. That is, truth is *objective* — it *doesn't* depend on evidence (or what people think).

Course Overview IV

- It is useful to think about *scales* of evidence and belief:

- *Rational Belief*:

Evidence against p. / Evidence in favor of p. / p? (balance tipped toward against)

- *Rational Disbelief*:

Evidence in favor of p. / Evidence against p. / p? (balance tipped toward favor)

- *Rational Suspension*:

Evidence against p. / Evidence in favor of p. / p? (balanced)

Course Overview V

- Ideally, the premises of an argument will provide good reason to believe the conclusion of the argument — it will be **strong**.
- Argument strength has *two components*:
  - **Logical component**: being **well-formed**.
    - For **deductive** arguments, this means being **valid**.
      - If the premises of a valid argument are (all) true, then its conclusion *must* also be true (on pain of *contradiction*).
    - For **inductive** arguments, it means being **cogent**.
      - If the premises of a cogent argument are (all) true, then its conclusion is *probably* (but *not necessarily*) true.
- Being well-formed is a matter of having the right *logical form*.
- There are many valid forms, and many cogent forms.
- The *logical* component is *non-epistemic (and non-empirical)*.

Course Overview VI

- Some Valid *Sentential* Forms:

A. Argument by elimination
1. Either *P* or *Q*.
2. ~*P*.
3. *Q*.

    1. Either the American League will win or the National League will win.
    2. The American League won't win.
    3. The National League will win.

B. Simplification
1. *P* and *Q*.
2. *P*.

    1. Sarah knows logic and Sam does not know logic.
    2. Sarah knows logic.

C. Affirming the antecedent (*Modus ponens*)
1. If *P* then *Q*.
2. *P*.
3. *Q*.

    1. If the president is in the White House, then the president is in Washington, D.C.
    2. The president is in the White House.
    3. The president is in Washington, D.C.

Course Overview VII

- More Valid *Sentential* Forms:

D. Denying the consequent (*Modus tollens*)
1. If *P* then *Q*.
2. ~*Q*.
3. ~*P*.

    1. If the president is in the White House, then the president is in Washington, D.C.
    2. The president is not in Washington, D.C.
    3. The president is not in the White House.

E. Hypothetical syllogism
1. If *P* then *Q*.
2. If *Q* then *R*.
3. If *P* then *R*.

    1. If Jones passes the test, then Jones passes the course.
    2. If Jones passes the course, then Jones graduates.
    3. If Jones passes the test, then Jones graduates

F. Contraposition
1. If *P* then *Q*.
2. If ~*Q* then ~*P*.

    1. If the president is in the White House, then the president is in Washington, D.C.
    2. If the president is not in Washington, D.C., then the president is not in the White House.

Course Overview VIII

- Two *Invalid Sentential* Forms:

A. Denying the antecedent
1. If *P* then *Q*.
2. ~*P*.
3. ~*Q*.

   1. If the president is in the White House, then the President is in Washington, D.C.
   2. The president is not in the White House.
   3. The president is not in Washington, D.C.

B. Affirming the consequent
1. If *P* then *Q*.
2. *Q*.
3. *P*.

   1. If the president is in the White House, then the president is in Washington, D.C.
   2. The president is in Washington, D.C.
   3. The president is in the White House.

Course Overview IX

- Some Valid *Predicate-Logical* Forms:

1. All *A*s are *B*s.
2. *x* is an *A*.
3. *x* is a *B*.

1. All men are mortal.
2. Socrates is a man.
3. Socrates is mortal.

1. All *A*s are *B*s.
2. *x* is not a *B*.
3. *x* is not an *A*.

1. All desserts are sweet.
2. This lima bean is not sweet.
3. This lima bean is not a dessert.

1. All *A*s are *B*s.
2. All *B*s are *C*s.
3. All *A*s are *C*s.

1. All fork-tailed flycatchers are birds.
2. All birds have wings.
3. All fork-tailed flycatchers have wings.

1. No *A*s are *B*s.
2. *x* is an *A*.
3. *x* is not a *B*.

1. No men are mothers.
2. Tom Cruise is a man.
3. Tom Cruise is not a mother.

Course Overview X

- Two more Valid *Predicate-Logical* Forms:

1. All *A*s are *B*s.
2. *x* is not an *A*.
3. *x* is not a *B*.

1. All men are mortal.
2. Fido is not a man.
3. Fido is not mortal.

1. All *A*s are *B*s.
2. *x* is a *B*.
3. *x* is an *A*.

1. All men are mortal.
2. Fido is mortal.
3. Fido is a man.

- A *cogent* (*invalid*) predicate form:

Most *A*s are *B*s.
x is an *A*.
----
x is a *B*.

Course Overview XI

- The *other* component of argument strength is *epsitemic*
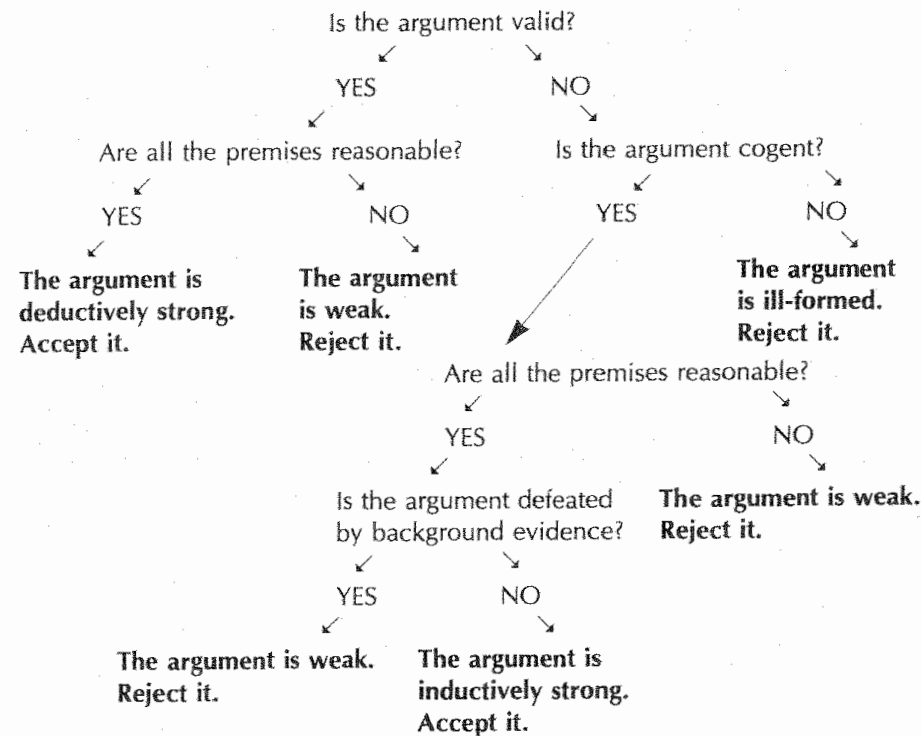 - **Epistemic component** of argument strength:
    - For *valid* (hence deductive) arguments, the *epistemic* component of strength is simple. It just requires *one thing*:
      - That *the premises of the argument are reasonable to believe* (given whatever evidence the argument's *assessor* has).
    - For cogent (inductive) arguments, the epistemic component of strength has an *additional* requirement.
      - That the argument is *not defeated* (by anything in the background evidence that the argument's *assessor* has).

- When eveluating an argument for its strength, it helps to use the "decision tree diagram" on the next slide…

Course Overview XII

Figure 4.1 Flowchart for Argument Evaluation

Is the argument valid?

YES — Are all the premises reasonable?
- YES: The argument is deductively strong. Accept it.
- NO: The argument is weak. Reject it.

NO — Is the argument cogent?
- YES — Are all the premises reasonable?
  - YES: Is the argument defeated by background evidence?
    - YES: The argument is weak. Reject it.
    - NO: The argument is inductively strong. Accept it.
  - NO: The argument is weak. Reject it.
- NO: The argument is ill-formed. Reject it.

Course Overview XIII

- You can think of the logical component and the epistemic component *going together* to *determine argument strength*.
- In the case of a valid argument, it's easy. The argument "scores 100%" on the logical component, and its overall strength is *proportional to how strongly our evidence supports the premises*.
- In the case of a cogent argument, it is more subtle.
- Cogent arguments "score over 50%" on their logical component, and their strength *does depend on* how strongly our evidence supports the premises. But, their strength *also depends on* whether our evidence contains a *defeater* of the argument.
- But, the *slogan* "logical score + epistemic score = strength" still applies for cogent arguments. It's just that the "epistemic score" also has to take account of any *defeaters* that we might have.

Course Overview XIX

- When **reconstructing** arguments, we aim to be **charitable**.
- That is, we aim to find the *strongest* arguments that we can, which are "suggested by" or "indicated by" the passage.
- This involves thinking hard about *which conclusions are best supported* by the premises presented (or implied) by the passage.
- It also involves making sure that the arguments we reconstruct are *well-formed*, and that their *premises are as reasonable as possible* (given what the passage *says* and implies).
- We assume the arguments are well-formed (i.e., that their *logical* aspects are in good shape). Then, any remaining controversy will be contained in the *premises* (either implicit or explicit).
- Ultimately, it should come down to *how plausible the premises are*, *given our evidence* (and whether we have any *defeaters*, *etc.*).