

*One goal of philosophy:* To take a position on an issue after having evaluated the *best arguments* for that position, and against that position. Ideally, you should be able to defend *objections* to your positions and have good *objections* to contrary positions. But objections are just another kind of *argument*. So, the key to having a good philosophical position is being a good consumer and producer of arguments.

Consider this a course an occasion to hone these skills. In particular, you'll be asked to *reconstruct arguments*. This amounts to the presenting *arguments in standard form*, such that they are *sound*. Let's discuss each of these aspects of an argument reconstruction.

### 1. What is an argument?

An argument is a set of statements such that one statement, the *conclusion*, is affirmed on the basis of the others, the *premises*. More colloquially, the premises are reasons to believe the conclusion.

If a passage expresses an argument, then you can often determine which of its statements are premises/conclusions by looking for *argument markers*. Some words are *reason/premise markers* and others are *conclusion markers*. Refer to Sinnott-Armstrong and Fogelin, pp. 52-53, for examples of each.

### 2. When is an argument in standard form?

In writing and speech, arguments can be expressed in many ways. To minimize the amount of interpretive guesswork and to maximize attention only on the arguments, it's useful to put arguments in *standard form*. An argument is in standard form when it's presented as follows:

1. [Insert your first premise here.]
2. [Insert your second premise here.]  
etc....
- n. [Insert your last premise here.]
- n+1. ∴ [Insert your conclusion here.] (from 1-n)

A few points about standard form:

- Each premise and the conclusion are listed and numbered.
- After the last premise, a horizontal line is drawn. This is to indicate that where the premises end and the conclusion begins.
- After the horizontal line, insert the number of the conclusion followed by “∴.” This is basically a fancy way of saying “therefore.”
- Finally, after the conclusion, list the numbers corresponding to the premises that support that conclusion in parentheses.

### 3. When is an argument sound?

An argument is *sound* if and only if it is *valid* and all of its premises are *true*. Let's look at validity and truth in turn.

#### 3.1. When is an argument valid?

An argument is valid if and only if it is not possible that all of its premises are true and its conclusion false.

Roughly, this captures the idea that the premises “guarantee” the truth of the conclusion. Remember that “premises” are more or less synonymous with “reasons,” and a good reason should provide some guarantee that the statement it supports is true.

Given that this isn't a logic course, there are two quick and dirty ways to evaluate the validity of an argument.

- First, if you can fit an argument into certain patterns, then the argument is always valid<sup>1</sup>. Here's a quick and dirty list of some of the more common valid argument patterns:

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<sup>1</sup> See the following for more details:

[http://community.middlebury.edu/~kkhalifa/Guides\\_files/Paraphrasing%20Arguments.pdf](http://community.middlebury.edu/~kkhalifa/Guides_files/Paraphrasing%20Arguments.pdf)

<i>Modus ponens</i>	<i>Modus tollens</i>	<i>Hypothetical syllogism</i>	<i>Disjunctive syllogism</i>	<i>Instantiation</i>
1. If $p$ then $q$	1. If $p$ then $q$	1. If $p$ then $q$	1. Either $p$ or $q$	1. All $F$ 's are $G$ 's
2. $p$	2. <u>Not-<math>q</math></u>	2. <u>If <math>q</math> then <math>r</math></u>	2. <u>Not-<math>p</math></u>	2. <u><math>a</math> is an <math>F</math>.</u>
3. $\therefore q$	3. $\therefore$ Not- $p$	3. $\therefore$ If $p$ then $r$	3. $\therefore q$	3. $\therefore a$ is a $G$ .

- Second, you can try to construct a *counterexample* to the argument. Every counterexample should:
  - Affirm of all the argument's premises.
  - Deny the argument's conclusion.
  - Explain *how this is possible*—that is, how the conclusion can still be false while the premises are all true.

If you can construct a counterexample to an argument, then it is invalid. (Look at Nolt on counterexamples for more about this.)

Generally, you should try to render arguments valid, even if it involves some minor departures from the text. This is a way of reading authors charitably, and also renders your understanding of the text more precise.

### 3.2. How can we know when all of an argument's premises are true?

An argument's validity only entails that *if* all of its premises are true *then* the conclusion must be true. This is consistent with any of its premises and/or conclusion *actually* being false. Obviously, the goal is to reason validly using only true statements. But remember that's exactly what it means for an argument to be sound!

Particularly in philosophy, we don't always have a clear way of knowing whether a statement is true or false. However, some statements are so *implausible* that we should be very reluctant to accept them. For instance, consider

- A political philosophy that claimed that slavery was just,
- An ethical theory that claimed that murdering for fun was moral, or
- An epistemology that claimed that we know that unicorns exist.

Importantly, many fancy philosophical claims don't state absurd things *explicitly*, but nevertheless *imply* absurdities that their authors haven't even considered. How do you uncover these things? By providing further arguments!

Generally, if your reconstruction involves really implausible premises, you should consider if there's something in the neighborhood that is more plausible.

## 4. Triangulation

Note that many times when you change one statement in an argument with an eye towards making it more plausible, you're forced to change other statements in the argument so as to preserve validity.

### 4.1. The process

- *Step 1:* Formulate an initial, valid argument.
- *Step 2:* Look for weaknesses in your premises.
- *Step 3:* Based on Step 2, revise your premises to make them more plausible.
- *Step 4:* Introduce the revised premises from Step 3 into your initial argument.
- *Step 5:* If the new premises render the argument invalid, alter your conclusion (and other premises) accordingly.

### 4.2. Example: abortion

*Step 1: Initial valid argument.* Consider the following argument, which I'll call *the 1<sup>st</sup> Pass of the Innocence Argument*

- (I1) It is always morally wrong to kill an innocent human being.
- (I2) Abortion involves killing a human fetus.
- (I3) A human fetus is a human being.
- (I4) A human fetus is innocent.
- (I5)  $\therefore$  Abortion is always morally wrong. (From I1-I4)

The argument is valid.

*Step 2: Weaknesses in premises.* However, it's not sound, as the first premise can be refuted by way of another argument. If Argument B's conclusion is the negation of a premise/conclusion of Argument A, then B is an *objection* to A. For example, the following is an objection to the 1<sup>st</sup> Pass of the Innocence Argument:

- (O1) Some mentally ill people threaten the lives of others.
- (O2) In such cases, mentally ill people are innocent.
- (O3) It is not morally wrong to kill such people in self-defense.

(Not-I1) ∴ It is not always morally wrong to kill an innocent human being. (from O1-O3)

*Step 3: Revise in light of Step 2.* Often, we can *revise* arguments in light of objections, so as to maintain the general thrust of the argument even if this means tweaking the details. In particular, the preceding objection is consistent with the following:

(I1\*) It is always morally wrong to kill an innocent human being, *except in self-defense*.

*Step 4: Introduce revised premises from Step 3.* Now, replace (I1) with (I1\*) to get the 2<sup>nd</sup> Pass of the Innocence Argument:

(I1\*) It is always morally wrong to kill an innocent human being, except in self-defense.

(I2) Abortion involves killing a human fetus.

(I3) A human fetus is a human being.

(I4) A human fetus is innocent.

(I5) ∴ Abortion is always morally wrong. (From I1\*-I4)

*Step 5: Revise argument so as to render it valid.* The problem, however, is that the second pass is *invalid!* So we need to adjust the conclusion so that it follows from the premises. This leads to the 3<sup>rd</sup> pass of the Innocence Argument:

(I1\*) It is always morally wrong to kill an innocent human being, except in self-defense.

(I2) Abortion involves killing a human fetus.

(I3) A human fetus is a human being.

(I4) A human fetus is innocent.

(I5\*) ∴ Abortion is always morally wrong, *except in self-defense*. (From I1\*-I4)