

# HANDBOOK (CHAPTER 1)

(v. 22-07-17)

## Important Concepts and Terms

- An argument is a unit of reasoning that attempts to establish that a claim is true by citing other claims as evidence. Arguments are composed of claims and connections.
- The claim that the argument tries to establish as true is called the "ultimate conclusion."
- Claims that the argument uses as evidence for the ultimate conclusion, but that the argument assumes to be true without providing evidence for them, are called "premises."
- An inference is the connection that holds between a set of claims, call it "R" for "reason," and another claim, call it "C" for "conclusion," when the truth of the claims in R is supposed to establish the truth of claim C.

## I) Recognizing an Argument

### 1. What is this doing?

Ask "What is this passage doing? Is it trying to convince us that something is true?"

- Inference indicators can be helpful.

Inference Indicator Expressions	
<p>Conclusion Indicators ("Therefore" Family) Introduce conclusions (C).</p>	<p>Reason Indicators ("Because" Family) Introduce reasons (R).</p>
<div style="text-align: center; margin-bottom: 10px;"> </div> <ul style="list-style-type: none"> <li>• R. Therefore C.</li> <li>• R. Thus C.</li> <li>• R. Consequently C.</li> <li>• R. Hence C.</li> <li>• R, [and] so C.</li> <li>• R goes to show that C.</li> <li>• R implies that C.</li> <li>• R means that C.</li> <li>• R. As a result, C.</li> <li>• R. That's why C.</li> <li>• R. It follows that C.</li> </ul>	<div style="text-align: center; margin-bottom: 10px;"> </div> <ul style="list-style-type: none"> <li>• C because R. / Because R, C.</li> <li>• C since R. / Since R, C.</li> <li>• C given that R.* / Given that R, C.</li> <li>• C assuming that R.* / Assuming that R, C.</li> <li>• C inasmuch as R. / Inasmuch as R, C.</li> <li>• C in view of the fact that R. / In view of the fact that R, C.</li> <li>• C. The reason is that R.</li> <li>• C. After all, R.</li> <li>• C. This follows from R.</li> </ul>
<p>* "P given that Q," and "P assuming that Q" can be tricky.                      As they are written here ("P given that Q" and "P assuming that Q") the "that" refers to the Q. They are basically saying, "We can conclude that P is the case given that Q is the case," and "We can conclude that P is the case assuming that Q is the case," and so Q is a reason supporting P.</p>	

If they were written as two sentences, often with a special emphasis on the "that" (e.g., "P. Given *that*, Q," and "P. Assuming *that*, Q") the "that" would refer to the P and the second sentence would be equivalent to "Given that P, Q" and "Assuming that P, Q." In that case P would be the reason supporting Q.

The one sentence version is a bit more common, so that's the one we'll be using.

## II) Analyzing an Argument

Understanding an argument consists of correctly identifying the claims that compose the argument and accurately tracking the connections (relationships) between those claims.

### 1. What is the main point?

Ask "What is the ultimate conclusion, the main claim that this argument is trying to get us to believe?"

- Inference indicator expressions can be helpful.
- The ultimate conclusion can appear at the end of the argument or at the beginning of the argument.

### 2. What is being claimed?

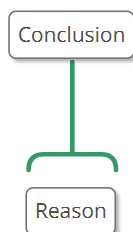
Return to the beginning of the passage, asking "What else is being claimed?" and "Is this claim part of the argument?"

- A claim is a statement that is either true or false, although we might not know which it is, so:
  - Ignore normal questions.
  - Ignore normal commands.

### 3. What is the connection?

Ask "How are these claims related to each other?" Represent that relationship.

#### Support Relationship



In a support relationship, one claim (or a set of claims), which we call the "reason," is being given as evidence for the truth of another claim, which we call the "conclusion."

To identify the support relationship:

- use inference indicator expressions if you have them.
- consider the content of the claims.

### III.a) Evaluating an Argument

An argument is good if it establishes that its ultimate conclusion is probably true.

An argument is bad if it does not establish that its ultimate conclusion is probably true.

Evaluating an argument consists of correctly assessing both the claims that compose the argument and the relationships between those claims.

#### Evaluate the Premise

An argument expects us to accept its premises. Premises should be true and should not presuppose that the conclusion is true. Consequently, if the claim is premise, ask:

“Is this premise true?”

An objection to an argument that asserts that a premise is false is a “not so’ objection” because it looks at a premise and says, in effect, “That’s not so.”

“Could someone who doesn’t already believe the ultimate conclusion believe this premise?”

#### Evaluate the Inference

An inference is good to the extent that the truth of the reasons would establish the truth of the conclusion. There are a number of ways to evaluate inferences.

An objection to an argument that asserts that an inference is weak is a “so what’ objection” because it looks at a premise and says, in effect, “So what?”

#### The Perfectly Gullible, Perfectly Rational Person (Bob) Test

Ask, “If a perfectly gullible, perfectly rational person (we could call him ‘Bob’ for short) believes the reasons, how likely is that person to believe the conclusion?” If this person is highly likely to believe the conclusion, then the inference is good. If this person is not likely to believe the conclusion, then the inference is bad. (Remember, premises and inferences are different things. A premise can be good even when the inference is bad, and an inference can be good even when the premise is bad.)

#### Evaluate the Argument.

Ask, “Are all of the premises and inferences good?”

## Adopt the appropriate attitude toward the ultimate conclusion.

Ask, “Is this argument good?”

- If we decide that an argument is good, we should be inclined to think that the conclusion is probably true. (Consequently, if we have strong reason to think that the conclusion is false, we should decide that there is something wrong with the argument, even if we can’t identify what it is.)
- If we’re faced with arguments for competing positions, we should believe the position supported by the strongest arguments.
- If we decide that an argument is bad, we should think that it *has not established* the truth of the conclusion but we shouldn’t take that to mean that the conclusion is false. Bad arguments tell us nothing at all about the truth or falsity of their ultimate conclusions.

## III.b) Communicating the Evaluation of an Argument

### 1. False Premise

- Say something like “This argument assumes P, and P is false because [evidence for P’s falsity].”

### 2. Premise that Assumes the Conclusion

- Say something like “This argument assumes P, and that assumes the conclusion U because [explain how belief in P presupposes belief in U / explain why people who don’t believe U won’t believe P].”

### 3. Bad Inference

- If you do believe the reasons in the inference, say something like “Just because R it doesn’t follow that C because [explain how R can be true and C false at the same time].”
- If you don’t believe the reasons in the inference, say something like: “Even if R, it wouldn’t follow that C because [explain how R can be true and C false at the same time].”

### 4. Best Practices

- Remember that the task is to evaluate the reasoning and not criticize the reasoner. Don’t personally attack the author of the argument.
- Avoid giving the impression that the person advancing the argument was stupid, lazy, corrupt, or otherwise negligent for failing to see the problems in their reasoning. Portray your objections as non-obvious.
- Note points of agreement.

## IV.a) Constructing an Argument

Constructing an argument involves posing a question, selecting an answer, and defending that answer by advancing evidence in its support.

### 1. Pose a question that you'd like to answer.

A good question:

- Matters. Its answer should affect what you think or do in some meaningful way.
- Is the right size. It shouldn't be too broad or too narrow.
- Has the right level of controversy. It shouldn't have an agreed-upon answer, and it you should be able to make some progress toward an answer.

### 2. Consider some answers to your question.

Research existing answers.

Formulate new answers.

### 3. Identify the answer that you think is probably true.

4. Identify one reason to support that claim by asking "What is a reason to think that this claim is true?" If the reason isn't true, revise it.

## IV.b) Communicating the Argument

Communicating an argument involves stating your case in a way that will make it easy for others to identify the claims that compose your argument and accurately track the relationships between those claims.

Make the connections between the claims clear to your audience.

Use inference indicator expressions.