

HANDBOOK

I. ARGUMENT RECOGNITION

Important Concepts

- An *argument* is a unit of reasoning that attempts to prove that a certain idea is true by citing other ideas as evidence.
- The idea that the argument tries to prove is called the “*ultimate conclusion*.”
- Ideas that the argument uses as evidence for the ultimate conclusion, but that the argument assumes to be true without providing proof, are called “*premises*.”
- Intermediate ideas on the way from the premises to the ultimate conclusion are called “*subconclusions*.”
- The connection that holds between a set of ideas, R, and another idea, C, when the truth of the ideas in R is supposed to establish the truth of C is called an “*inference*.”

In order to identify an argument, we ask, “Is this passage trying to convince us that something is true?” If so, the passage contains an argument. If not, it doesn’t.

- Tips -

Use Inference Indicator Expressions

- We can sometimes recognize an argument by spotting inference indicator expressions.
- *Reason indicator expressions* show that X is being given as a reason to believe Y. Some examples: “Y because X” or “Because X, Y.” “Y, since X” or “Since X, Y.” “Given that X, Y” or “Y, given that X.” “Assuming that X, Y” or “Y, assuming that X.” “Inasmuch as X, Y” or “Y, inasmuch as X.” “In view of the fact that X, Y” or “Y, in view of the fact that X.” “Y. The reason is that X” “Y. After all, X.”
- *Conclusion indicator expressions* show that Y is supposed to be concluded from X. Some examples: “X. Therefore Y.” “X. Thus Y.” “X. Consequently Y.” “X. Hence Y.” “X. So Y.” “X. This goes to show that Y.” “X. It follows that Y.” “X. As a result, Y.” “X. That’s why Y.” “X, which implies that Y.” “X, which means that Y.”
- To determine whether an inference indicator expression is a reason indicator expression or a conclusion indicator expression, first replace it with “because,” then replace it with “therefore,” and see which passage is more like the original.

II. ARGUMENT ANALYSIS

Identifying the important ideas, identifying the argumentative role of the ideas, identifying the inferences, and reconstructing the argument are often intermingled in practice and are frequently done mentally.

1. Identify the important ideas

We make a list of the important ideas in the argument. Ideas are complete thoughts that are either true or false, even though we might not know for certain which it is.

- Tips -

Start With the Ultimate Conclusion

- We start by asking, “What is the main idea that this argument is trying to get us to believe?” This main idea is the ultimate conclusion and we write it first in our list of important ideas, giving it the number “1” and putting a “U” next to it.

Identify the Other Important Ideas

- After we’ve identified the ultimate conclusion, we go back and record all of the other ideas that strike us as relevant to establishing the truth of the ultimate conclusion, and number them starting with “2.”

Sentences and Ideas

- Sentences that convey ideas are usually statements. To be complete, a statement must have a subject and a predicate.
- Normal questions don’t convey ideas.
- Normal commands don’t convey ideas.

Use Inference Indicator Expressions

- Inference indicator expressions can help us decide if an idea is important. If an idea is the object of an inference indicator expression, then it’s either the reason or the conclusion of an inference and so needs to be included in the argument.

2. Identify the argumentative role of these ideas

If we know what the ultimate conclusion of the argument is, we put a “U” next to it.

For each of the other ideas in our list, we ask, “Does the argument give us reason to believe this, or does the argument just take it for granted?”

If the argument *doesn't* give us reasons to believe an idea, it’s a premise. We put “P”s next to the premises.

- Tips -

Use Inference Indicator Expressions

- We can use inference indicator expressions to help us.
The ultimate conclusion can be the object of conclusion indicator expressions but not reason indicator expressions.
Premises can be the object of reason indicator expressions but not conclusion indicator expressions.

3. Identify the inferences

We can focus on the ultimate conclusion and ask, “What reason does the argument give us to believe this?” or we can focus on the premise and ask, “What is the argument taking this to establish?”

We draw an arrow pointing from an idea to the idea that it's taken to support.

- Tips -

Use Inference Indicator Expressions

- We can make use of inference indicator expressions to help us here.

Arrow In and Out Rules

- The ultimate conclusion must have at least one arrow pointing *to* it but *no* arrows pointing *from* it.
- Premises must have arrows going *from* them but *no* arrows going *to* them.

Double Checking the Inferences

- We double check the inferences by reading away from the arrow head with a reason indicator expression, by reading toward the arrow head with a conclusion indicator expression, and by comparing our inferences against the original argument.

4. Reconstruct the argument

We reconstruct the argument by diagramming it.

We refer to the ideas by number, put the number of the ultimate conclusion at the bottom, the numbers of the premises at the top, and use arrows to represent the inferences. We label the arrows with capital letters to make them easier to refer to later.

III. ARGUMENT EVALUATION

1. Appreciate the general structure of the argument

A good argument establishes the truth of its ultimate conclusion and gives its audience good reason to think that the ultimate conclusion is true.

A bad argument either doesn't establish the truth of its ultimate conclusion or else doesn't give its audience good reason to think that the ultimate conclusion is true.

For premise / ultimate conclusion arguments, one bad premise or one bad inference is enough to make the argument bad.

- Tips -

The Hanging Man Model

- We can imagine that the ultimate conclusion of the argument is a fellow hanging onto a rope (inference) suspended from a beam (premise). An argument is good if it holds the fellow up and bad if it lets the fellow fall.

2. Evaluate the premises

When evaluating a premise, we should ask ourselves three questions:

- 1) "Is this premise true?"
- 2) "Would most members of the argument's audience, including people who don't already believe the ultimate conclusion, believe this premise?" and
- 3) "Does the argument's audience have good reason to believe this premise?"

If the answer to one of these questions is "no," the premise is bad.

If the answer to all three questions is "yes," then the premise is good.

3. Evaluate the inferences

To say that the inference between R and C is *valid* is to say that *if R were true then C would have to be true* as well.

To say that the inference between R and C is *good* is to say that *if R were true then C would most likely be true* as well, although it wouldn't *have to be true*.

To say that the inference between R and C is *bad* is to say that *even if R were true, C could very easily be false*; it's to say that the truth of R has virtually no bearing upon the truth of C.

- Tips -

The Bob Method

- Bob is a perfectly gullible but perfectly rational person. We tell Bob to believe R and then ask ourselves "In light of his belief in R, how likely is Bob to believe C?" If Bob is compelled to believe C, then the inference between R and C is *valid*. If Bob is inclined but not compelled to believe C, then the inference between R and C is *invalid but good*. If Bob is not at all inclined to believe C, then the inference between R and C is *invalid and bad*.

4. Evaluate the argument

We evaluate the argument in light of our evaluation of the premises and the inferences.

Finding out that an argument is bad gives us no useful information about the ultimate conclusion because bad arguments can have true or false conclusions.

Finding out that an argument is good does give us useful information about the ultimate conclusion because good arguments must have true conclusions. If we think that an argument is good, we should believe the ultimate conclusion. If we think that an argument is *pretty good* but not perfect, we should think that the conclusion is probably, but not definitely, true. If we're faced with arguments for competing positions, we should believe the position supported by the strongest arguments.

Recognizing, Analyzing, and Evaluating Arguments in Real Life

Unless an argument is particularly long, difficult, or important, we'll probably end up doing much of the analysis and evaluating mentally instead of on paper. We can do this by:

- identifying the ultimate conclusion of the argument,
- determining what other ideas are important,
- determining how these ideas relate to each other in the argument (e.g. where the inferences are, and so on),
- assessing the premises and inferences.

IV. ARGUMENT CONSTRUCTION

1. Determine the ultimate conclusion

We determine our ultimate conclusion by

- posing a question,
- considering various answers to the question,
- learning and thinking more about the issues involved, and
- formulating our answer to the question.

The answer we settle on will be the ultimate conclusion of our argument.

2. Construct the chain of reasoning

We construct our chain of reasoning by asking "What is one reason to think this idea is true?"

Once we have an idea down, we diagram our argument.

We assess our premise. If a premise isn't true, we change it to something that is.

3. Communicate the argument

The passage containing our argument should be well written and easy to diagram.

- Tips -

General Writing Advice

- **Word Choice:** We should use our working vocabulary, and we should avoid specialized terminology like "ultimate conclusion," "subconclusion," "premises," or "inference."
- **Sentence Structure:** We should use complete sentences; in particular, we should make sure that all of our simple sentences have a subject and predicate.
- **Sentence Variation:** We can add some normal question or command sentences for rhetorical flourish.
- **Highlighting Inferences:** We should use inference indicator expressions to make the argument easier to understand.