

In sum, my overall proposal is this:

1. Challenges can point at the (number representing) the proposition being falsified or at the inference arrow.
2. Challenges can be recognized as such because their direction is opposite to the arrow being challenged (if challenging an inference) or to the arrow out of the number.
3. Use the split-tailed arrow to indicate ambiguity between one argument/ multiple arguments.
4. Each of the (multiple) tails of the arrow means "support"; the (single) head of the arrow mean "justifies".
5. Use parentheses to demarcate lines of support with more than one premise.

Single Line of Reasoning

Single Proposition

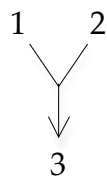


Connected Propositions



Multiple Lines of Reasoning

Optional



(also known as
"piling-on-reasons")

Conjoined



In the second diagram, there is a single line of argument expressed in two premises. In the third diagram, there are two lines of argument, working together to provide sufficient reason to believe the conclusion.

In the fourth, 1 and 2 represent two lines of support; it is not clear whether both are need for sufficient support.

Exercises

- A. Single arrow diagrams, such as those we just looked at
- B. Compound/extended (also conclusion-conjunction)
- C. Objections and Rebuttals
- D. Analyzing Very Long Passages (Editorials)

A & B

- (1) House-builders work awfully hard. Their workday is longer than 8 hours; the job involves heavy lifting and there's the possibility of injury. They also have to contend with the weather.
- (2) Jim will go after anything interesting he gets a whiff of. It looks like he's smelling something right now. So, he'll go running after it. We don't want to lose him, so, hold on tight.
- (3) Deepwater Horizon's poor workmanship and lax safety standards are responsible for causing the oil leak in the Gulf. Since those who are responsible should pay for the resulting costs, Deepwater Horizon should pay for the costs.
- (4) Most employers fire employees who don't show up on time without a good reason. Cindy never shows up on time. She has no excuse—she lives only two minutes from her place of employment. So, she should be fired by her employer.
- (5) We don't know for certain that the accused is guilty. The old woman's testimony is questionable, since she was 60 feet away and it was night-time, and the man's testimony is dodgy, too—how could he have heard the argument with the train rolling by? (Based on *12 Angry Men*)
- (6) When people are happy, they don't strive as much as when they are not. This is the conclusion of research which found that slightly less happy people are more successful than those who are completely content with life. Anti-depressants make people feel happy when they otherwise might not. As a result, anti-depressants should be used only in extreme situations.
- (7) People still remember Wheatus' song "Teenage Dirtbag". This would be explained if it has a catchy tune. There's no better explanation—the vocals were bad and the lyrics were neither deep nor clever. So, the reason people remember it is because it is catchy.
- (8) My accuser says I [Socrates] believe in spiritual matters but not in gods. Now, who could believe in spiritual matters without believing in spirits? So, I believe in spirits. And spirits are the offspring of gods. Since no one can believe in the offspring and not believe in the parents, then, of course, I must believe in gods. So, it's clear that contradicts himself, and so, that he doesn't know what he's talking about. (Based on Plato's *Socrates' Defense*)

C.

- (1) Republicans argue that Guantanamo must remain open because moving prisoners from Guantanamo to main-land U.S.A. puts American citizens at risk. But this is absurd. The prisons they would be held in are super-max facilities that are completely secure. Indeed, the shoe-bomber and one of the 9/11 plotters are already securely incarcerated in U.S. prisons.
- (2) Those who argue that Shellie Ross is an unfit mother for "tweeting" during her son's drowning simply have their facts wrong. She did not tweet any information until she was in the hospital after her son was receiving medical attention.
- (3) The Associated Press has named Serena Williams as its 'Female Athlete of the Year' for 2009, on the basis of winning Wimbledon to add to her two previous grand slam wins and her #1 ranking. The AP's decision is a mistake, however. Williams had a terrible display of bad behavior in the US Open semi-final. She lost her temper and physically threatened a line-judge who had called a foot-foul against her. Athletes are role-models to children everywhere and this is not the kind of behavior young girls should be imitating.
- (4) Those who argue that Shellie Ross is an unfit mother for "tweeting" during her son's drowning simply have their facts wrong. She did not tweet any information until she was in the hospital and her son was receiving medical attention. She is, however, an unfit mother for having sent so many tweets in the time prior to the drowning—any parent who spends this much time on Twitter when they have kids is obviously not giving them proper attention.

D. Editorial analysis Exercise

Methods of Logic

Exercise Set (1) on Long Arguments (3.5)

Part 1

Editorials (and opinion-editorials) provide us with a good opportunity to practice our skills of argument analysis because they are frequently very messy. Like any argument they state a claim and offer some justification for it, but the structure of the argument is often complex—editorials are often joint arguments, and they often consider (and reject) objections to the opinion.

Read the editorial at

<http://blogs.usatoday.com/oped/2009/12/debate-on-terror-suspects-our-view-you-cant-close-gitmo-if-you-dont-move-the-prisoners.html>

and follow the following instructions.

Identify the Conclusion

1. What is the ultimate conclusion of the piece?
2. Explain how you know what the conclusion is, appealing to flag words and the overall structure of the argument. Other evidence is available in an editorial: look at the title or headline to the piece, though sometimes the title will simply state the topic, rather than the conclusion.

It is often necessary to read the entire piece in order to identify the conclusion, and indeed, sometimes it is necessary to perform the other steps first.

Wrestle the Text into Shape

3. Summarize the material by writing a single proposition which expresses each point. Group the propositions into related topics, where possible. Do *not* write out every proposition in the article, unless it is extremely concise.
4. Note any changes to the text you make due to variation, pronouns, parenthetical remarks, etc.

Editorials are long, but the length is often due to examples or repetition.

Editorials often include a lot of variation. This is perhaps because they must engage the reader's interest.

The set of propositions you generate will provide you with a list from which you can take the propositions for your diagram.

Diagram (or Standard Form)

5. First provide a diagram of the (main) positive argument.
6. Next, add the objections and rebuttals.
7. Note any modifications at this stage, including propositions from the list that were not used and missing premises you added.