

Tuesday Jan 15, 2013

## Analyzing Arguments

Goals:

### I. Showing the structure of arguments

- Arguments may deal with difficult subject matter, be stated in obscure language, or be long and complex. This chapter will give us the tools necessary to analyze arguments
- The goal is to reach the point where we can evaluate arguments, asking questions such as 'Are the premises true?' or 'Is the inference logically successful?'

### Standard form

- Arrange the claims so the premises come before the conclusion they support. intermediate and final conclusion
- # the premises and conclusions in the revised order (p15)
- After each conclusion, write the # of the premises that support it. (p19)
- We can employ a diagram to show the connections among claims in complex arguments
- Premises are independent if they offer separate reasons for the conclusion
- Premises are dependent if they offer related reason (or they depend on the form of the argument) for the conclusion

### II. Strategies of analysis

- Indicators and context
  - Identify inference indicators
  - Consider the larger context
- Dealing with Claims
  - Identify each claim
  - Reformulate claims if necessary
  - Discard extra elements
- Structures
  - identify main argument
  - identify any sub argument
  - identify replies to objections

### Two Special Problems

Arguments and explanations

Conditions (if...then...), Disjunctions (either...or...), "unless"

- Each one only makes one claim

Example: All men are mortal. Socrates is a man. Therefore, Socrates is mortal.

Premises:

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

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3. Conclusion: Socrates is mortal (1,2).

Premise:

1. With very few exceptions, no philosophy, no political ideology, has ever been presented as anything other than an exercise in liberation.

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2. Conclusion: There is no notion more ambivalent than that of "freedom." (1)

You should read Sartre. Existentialism confronts the nothingness at the core of our existence, and Sartre is a good writer.

Premises:

1. Existentialism confronts the nothingness at the core of our existence,
2. and Sartre is a good writer.

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3. Conclusion: You should read Sartre (1,2). There premises are independent.

I didn't bring an umbrella. If the rain stops, then I won't get soaked walking home. The rain stopped. I wont get soaked walking home.

1. If the rain stops, the I won't get soaked walking home
2. The rain stopped.

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3. I won't get soaked walking home (1,2).

1. Ed must either save money during the school year or work all summer.
2. He did not save money during the school year.

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3. He will work all summer (1,2).

1. The Cat90 is the best lawnmower you can buy.
2. You want the best.

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3. You should buy the Cat90 (1,2). Dependent premises

1. Henry has started a weight-lifting program.
2. Weight lifers are usually very strong.
3. Henry will soon be very strong 1,2
4. Anyone who is unusually strong can make the football team.

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5. Henry will make the football team. 3,4

Thursday Jan 17, 2013

p 26. 6

1. A normal clover has 3 leaves.
2. 4-leaf clovers are very rare. 1
3. 4-leaf clovers bring good luck.

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4. You should never pass up a four-leaf clover. 2,3

8

1. AIDS is always lethal.
2. AIDS has no cure.
3. AIDS is often transmitted through pleasure.

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4. AIDS may be the most horrible disease in the world's history. (1,2,3)

10

1. We haven't been out all week.
2. Exercise will be good for us. 1
3. The air is crisp.
4. The leaves are turning to lovely reds and yellows.

-----

5. We should go for a hike. 2,3,4

12

1. The WWN said the hikers were devoured by army ants.
2. Not much in WWN is true.
3. The hikers were not devoured by army ants. 1,2
4. If they were not devoured by army ants, then we don't know what happened to them.

-----

5. We don't know what happened to the hikers. 3,4

14

1. The detective has the reputation of being a racist.
2. He is unlikely to be a convincing witness. 1

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3. The defendant will be acquitted. 2

16

1. David Hume was a more lucid writer than Immanuel Kant.
2. Hume was a 1st-rate historian as well as a philosopher.
3. Hume's contributions were more diverse than Kant's. 2
4. Unlike Kant, Hume would never have said that the duty not to lie is so absolute that we should answer truthfully even when a would-be murderer asks where his intended victim is hiding.
5. Hume's ethical thought did not suffer from the rigidity of Kant's. 4

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6. Hume is the superior thinker to Kant. 1,3,5

18

1. Dozens of people claim to have seen Elvis Presley since his supposed death in 1978.
2. Dozens of people would not be wrong.
3. Elvis Presley is still alive. 1,2

-----

4. "Hound Dog" will soon be best-selling again. 3

20

1. Cocaine is addictive.
2. The cocaine user will always be looking for a greater high.
3. Cocaine use will lead to the use of even harder drugs. 2
4. Cocaine use is illegal.
5. It is bad for your nose.
- 
6. You should stop sniffing cocaine. 1,3,4,5

Tuesday Jan 22, 2013

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### Argument Evaluation

- When an argument shows that its conclusion is worth accepting...
  - we say that the argument is good
- When an argument fails to do so...
  - we say that the argument is bad
- But there are different ways for an argument to be good or bad
  - because there are different types of arguments

### Deductive argument

- an argument intended to provide logically conclusive support for its conclusion
- 'their premises are meant to guarantee the conclusion.' (28)

1.

- Final, definitive, undeniable support
- The structure of some arguments is deductive
- When arguments structured this way are good, they guarantee their conclusion
- Ex: If whales are mammals, they have lungs, Whales are mammals. Therefore, whales have lungs. (This relies on the form or pattern of the argument). (p.29)

2.

- A deductive argument that succeeds in providing conclusive support for its conclusion is said to be valid
- 'Valid' does not mean 'true'
  - 'Valid' means the argument has good logical structure
  - A valid argument is such that if its premises are true, its conclusion must be true
  - If the argument is valid, then if the premises are true, the conclusion has to be true, too.

In each case, if the premises offered really are true, then the conclusion must also be true.

Ex. J is taller than A. A is taller than M. So J is taller than M. (Refer to p.32)

3. If a deductive argument fails at providing conclusive support for its conclusion, then it's called invalid.

4. A deductively valid argument with true premises is said to be sound.

- 'Valid arguments, all of whose premises are true, are called sound arguments.' p 30

- Two issues to consider

1. Are the premises true?

2. Do those premises lead to this conclusion?

There are two separate issues!

- You can have false premises that still support the conclusion given

- You can have true premises that don't support the conclusion given

- Example:

- False premises that still support the conclusion given:

Pigs have wings.

Any animal with wings can fly.

So, pigs can fly

- The premises are both false!

- The conclusion is also false!

- Do the premises support the conclusion?

- Yes. The structure for the argument is valid.

- Or the premises are false and the conclusion is true (29).

- The moon is made of green cheese, and everything made of green cheese orbits the earth.  
Therefore, the moon orbits the earth.

But, true premises aren't enough

- True premises that don't support the conclusion given.

Gasoline is poison.

Bleach is poison.

So, gasoline is bleach.

- Or...

All boys are males.

All girls are females.

Therefore, all women are females.

- Here, the premises and conclusion are all true, but the premises don't support the conclusion.

- There can be true premises, and a true conclusion.

- And false premises and a true conclusion.

- And false premises and a false conclusion.

- But a valid argument cannot have true premises and a false conclusion.

## Nondeductive argument

- an argument intended to provide probable (but not conclusive) support for its conclusion
- 'the premises are meant to confer some high degree of probability on the conclusion.'

Thursday Jan 24, 2013

## Chapter 3, Part II

### Nondeductive arguments

- A 'nondeductive argument is any argument that is not meant to be valid but is meant to confer some high degree of probability on the conclusion.' (35)
- These arguments are sometimes called 'inductive', but this term is sometimes restricted to meaning
  - Recall p.31
  - 99% of students in the course will pass. P is a student in the course. [Thus] P will pass the course.
  - As we have seen, this argument is invalid.
  - However, judged as a nondeductive argument (and only with this information given), it is close to certain that P will pass the course.
- 1. "The first general characteristic of nondeductive arguments (NDAs) is that they are not meant to be valid, but they are meant to make their conclusions probable or likely." (35)
- 2. NDAs are judged as to whether their premises make the conclusion more likely than not. Success depends on a matter of degree.
- 3. New (relevant) information can change probability.
- 1. 96% of Americans belong to some religious group or other. X is A. Therefore X belongs to some religious group or other.
- 2. 78% of Americans are C. W is an A. Therefore W is a C.
- 3. 55% of Americans do not regularly attend religious services. M is an A. Therefore, M does not regularly attend religious services.

### Vocabulary

- A NDAs is going to be judged as to whether it is successful (more likely than not) or unsuccessful.
- A successful argument will be: close to certain, very likely, or somewhat likely.

### Varieties of NDAs

- Statistical Syllogism: this argument reasons from a portion of a population to an individual.
  - Sometimes we have good, but incomplete knowledge of some group of people or things...
  - and based on that, we reach a conclusion about some members of that group.
  - Example: 'Canada's Parliament is overwhelmingly white and male. So your MP is probably a white male!'
- To analyze a statistical syllogism, we need to be able to identify:
  - the individual being examined,
  - the group to which that individual is said to belong.
  - the characteristic being attributed, and
  - the proportion of the group said to have that characteristic

- Won't necessarily cite an actual, numerical statistic
  - sometimes it will say '93.4%' or "three quarters'
  - but sometimes it will just say 'most' or 'nearly all' or 'lots of'.
- The point: one premise will always contain a generalization about the group
- Inductive Generalization: inference from a sample population to a larger group
- Plausibility Arguments: to establish a case, premises should be relevant to the conclusion, and count in favour of it.

Thursday Jan 31, 2013

#### Republic, Book II

- Plato/Socrates wants to combat a common view of justice: that "the best is to do injustice without paying the penalty; the worst is to suffer it without being able to take revenge" (359a).
- That if possible, a person would act unjustly if he know that he would not be caught

#### The Origin of Law and Justice

- To do injustice is good, but to suffer injustice is bad
- In fact, to suffer injustice is worse than the benefits of doing injustice
- Thus law begins when people agree to "neither do injustice nor suffer it" (359a).
- Thus justice is a mean, or middle ground, between these two extremes

#### Book IV

- Plato seeks to define justice as measure, ratio, or harmony
- Socrates argues that the aim of the rulers should be to establish that "no citizen should have what belongs to another or to be derived of what is his own
- He has previously established that each member of the city must practice the occupation for which he (or she) is best suited. In Plato's city there are:
  - (A) Those who are producers, and who are occupied by crafts (or, better, skills) such as shoemaking, carpentry or farming, and
  - (B) Those who watch over the city (guardians), who are divided between the auxiliaries or soldiers, and the rulers
- From these two premises, it follows that justice would be each person practicing his own skill. Otherwise, if there roles were exchanged, injustice would occur
- Plato seeks to establish that the city and the soul have the same tripartite division (435e).

<b>Class in the City</b>	<b>Function</b>
Producers	Money-making, working
Auxiliaries	Keeping order
Rulers/Philosopher King	Deliberation, contemplation

- Like the city, each part of the soul will only do one thing (436b).

- First, Socrates establishes that there are appetites such as hunger, thirst, etc. (437c).
- But since each part of the soul can do only one thing, Socrates argues that the soul cannot just be appetitive, for sometimes despite thirst or hunger, we decide not to eat or not to drink (439). Instead, we make a decision about indulging through rational calculation, which shows that we also have a rational part of the soul
- This leads to a question about the spirited part of the soul (affect/emotion)
- The first suggestion, is that the spirit is part of the appetite. However, Socrates argues that spirit reproaches the appetites:
- “when appetite forces someone contrary to rational calculation, he reproaches himself and gets angry with that in him that’s doing the forcing [basically, gets mad at the appetites], so that of the two factions that are fighting a civil war, so to speak, spirit allies itself with reason” (440b-c)

<b>Part of the Soul</b>	<b>Class in the City</b>	<b>Function</b>
Appetite	Producers	Money-making
Spirited	Auxiliaries	Keeping order
Rationality	Rulers/Philosopher King	Deliberation, Contemplation

- Keeping them in order will establish harmony in both the individual and the city (441d)-this is justice
- The city is just because each part is doing its own work-and so would be individual
- Spirit used correctly is courage (442ff), reason used correctly is wisdom, and moderation balances between the appetite, reason and spirit

#### Virtues

- The appetite is dominated by insatiable desire (which, of course, isn’t a virtue at all).
- The spirit’s virtue, like that of the auxiliary is courage
- The rational part’s virtue, like that of the philosopher king, is wisdom

#### Justice

- Harmony between the parts, with each doing what is its own (443d).
- Injustice:” must be a kind of civil war between the three parts, a meddling and doing of another’s work, a rebellion by some part against the whole soul in order to rule it inappropriately” (444b).

**Reasoning and Critical Thinking: Study Examples for First Test**  
**Professor: Devin Zane Shaw**

**Examples for Chapter 2**

**Rewrite in standard form and diagram.**

1. Here are some reasons you should major in English: you can become a better writer, you can read the classics of literature, and you don't have to do all that math.

1. You can become a better writer.
2. You can read the classics of literature.
3. You don't have to do all that math.

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4. You should major in English (1,2,3).

2. The senator lied when he claimed that he never supported such a program, because the record shows that he co-sponsored a bill funding the program. If a politician lies, the media is going to report how the politician is distorting the record by reporting the facts. The senator lied, so the media will report the facts.

1. The record shows that he co-sponsored a bill funding the program.
2. The senator lied when he claims that he never supported such a program (1).
3. If a politician lies, the media is going to report how the politician is distorting the record by reporting the facts.

-----  
4. The media will report the facts (2,3).

4. Either Maggie, Jose or Ed broke the window and stole the money. Jose couldn't have done it because he was studying in his room and was observed the whole time. Maggie couldn't have because she was out of town and has witnesses to prove it. So the thief had to be Ed.

1. Either Maggie, Jose or Ed broke the window and stole the money.
2. Jose was studying in his room and was observed the whole time.
3. Jose couldn't have done it (2).
4. Maggie was out of town and has witnesses to prove it.
5. Maggie couldn't have done it (4).

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6. The thief had to be Ed (1,3, 5).

5. Some say that those without strong religious beliefs cannot be moral. Many nontheists and non-religious people have produced many great morally principled works in history. The Stoics of antiquity wrote handbooks on ethics, and some twentieth century philosophers, such as Noam Chomsky and Jean-Paul Sartre, have opposed immoral colonial wars. Moreover, not all people who profess religious beliefs act morally, like the horrible conduct of religious wars or, in a less violent example, that minister who got caught with prostitutes. Therefore, religious belief is not synonymous with morality.

1. The Stoics wrote handbooks on ethics.
2. Some twentieth century philosophers, have opposed immoral colonial wars.
3. Many nontheists and non-religious people have produced many great morally principled works in history (1,2).
4. The horrible conduct of religious wars is not moral.
5. The minister who got caught with prostitutes was not moral.
6. Not all people who profess religious beliefs act morally (4,5).
- 
7. Religious belief is not synonymous with morality (3,6)

### **Examples for Chapter 3**

**For the following deductive argument, state whether it is valid or invalid, and then explain your decision in each case.**

1. If you visit northern Manitoba in December, then you will see polar bears. Jones saw polar bears, so he must have been there in December.

Invalid, Jones may have seen polar bears elsewhere or at different time. A valid argument would affirm that 'Jones visited northern Manitoba in December.'

2. If an animal species exhibits self-conscious behaviour, then humans should not exploit that species for commercial gain. Whales exhibit self-conscious behaviour. Therefore, whales should not be exploited for commercial gain.

Valid.

**For the following, identify the type of nondeductive argument that is employed, and then state whether it is successful or unsuccessful. If the argument is unsuccessful, explain why. If the argument is successful, explain why the premises make the conclusion close to certain, very likely, or somewhat likely.**

1. Your band is against corporations. As you know, purchasing music released by major labels and major distribution channels standardizes musical tastes. “Everywhere we look,” writes Jacques Attali, “the monopolization of the broadcast of messages, the control of noise, and the institutionalization of the silence of others assure the durability of power.” The best music never makes it to the Billboard charts, as it is not easily marketable. With the increasing popularity of the internet, enterprising bands will have a better opportunity to reach their fans through lesser means. Therefore, your band should stay with an independent label and not sell out.

The conclusion is that your band shouldn't sell out. From there, it is important to judge how much support the premises give the conclusion.

Answer: Plausibility argument. Successful; somewhat likely.

2. Of the thousands of birds that have been examined in numerous habitats all over the world, it has been discovered that 95% have feathers. This gives very good reason to think that the great majority of birds have feathers.

Inductive generalization. Successful; close to certain.

Reasoning: if it is true that they have examined thousands of kinds of birds, and 95% have feathers, it is close to certain that the great majority of birds have feathers.

3. Most intellectuals cannot explain the “Continuum Hypothesis,” formulated by the mathematician Georg Cantor. Since my calculus professor is an intellectual, he wouldn't know how to explain the “Continuum Hypothesis.”

Plausibility argument; unsuccessful. The premises aren't relevant to the conclusion. While most intellectuals can't explain the continuum hypothesis, it is something that most mathematicians have a general idea of what is at stake in the problem.

The argument is a special case

Feb 12, 2013

Deductive Argument (Formal & Informal)

Categorical statements (one category of group or thing, telling how it belongs to a larger group)

- All trout are fish (Universal claim about all members of the group)
- Some fish are trout (At least one, existential statement "there is/are")

- Venn diagrams are easier ways to formalize the statement (See diagrams)

- Exercises p81

Categorical syllogisms (Overlap the two claims)