Popularity, Authority, Ignorance

Fallacies of Relevance, part deux
Philosophy and Logic
Section 6.4
Fallacies of Relevance

• Ad Hominem
• Appeal to Force
• Appeal to Pity
• Appeal to the People
• Appeal to Authority
• Appeal to Ignorance

Herein we will cover the last three — popularity, authority, ignorance
Appeal to People
(\textit{argumentum ad populum})

An argument that attempts to win popular support for some conclusion by associating it with feelings of group solidarity, affiliation, or loyalty.

The paradigm example:
Everyone believes P.

Therefore P is true.
Contrariwise...

Use the lack of popularity of a belief as grounds for its falsity:

Very few people believe $P$

$P$ must be false.
Truth by polling belief

• The majority of those at the Copenhagen conference believe global warming is man-made.

• Very few climatologists take the arguments of the global warming skeptics seriously.

• In 1902 no one believed that gravity could bend light.
The power of *ad populum*

Humans are social animals.  
*Very* few people will stand up against a crowd.
Appeal to Authority
(argumentum ad verecundiam)

If you cannot find any good argument for P, find some authority figure and get them to tell people that P is so.

This works because humans and other primates have a deep emotional need to believe that someone above them knows what’s best. Initially (at least) we all look up to our parents. We feel a need to trust those above us.

– Suggestion: reasonable adult citizens should resist this primate instinct.
Definition: Appeal to Authority

An argument in which

(a) the only grounds given for $P$ is that some authority figure says that $P$, but

(b) the subject matter of $P$ is not within the scope of the expertise of the “authority”.

The test for the fallacy

$P$ is our conclusion. Check:

(a) the *only* grounds given for $P$ is that some expert or authority says that $P$, and

(b) the subject matter of $P$ is NOT within the scope of the expertise of the person cited.
Examples

celebrity endorsements
– Rebecca Lobo for Chevrolet

“expert” witnesses
– child abuse experts
– memory recovery experts
– liability suits

psychiatric testimony re
– predicting violence
– lack of free will
More examples

– pseudo-scientific endorsements
– studies show....
– use of polls and surveys
– Vice President what's his name on military strategy
– Coach Jim Calhoun on journalistic integrity
– James Randi on ESP
Argument from Ignorance
(\textit{argumentum ad ignorantiam})

An argument in which our inability to prove that $P$ is true is taken to show that $P$ is false, or our inability to prove that $P$ is false is taken to show that $P$ is true.
What is wrong with these arguments?

You cannot prove that $P$.

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Ergo, it is not the case that $P$.

You cannot disprove $P$.

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Ergo $P$ is true.
Example

There have been many recorded episodes of people suddenly having premonitions that something bad was about to happen to a loved one.

Sometimes the premonitions come true, but the loved one was warned, and disaster is averted.

It is impossible to show that none of these episodes involve genuine foreknowledge of the future: *knowing* that P will happen before it does happen.

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So probably, at least sometimes, some people have genuine foreknowledge of the future.
Sorry!

It just doesn't follow.
See in particular the last premise.
From:

It is impossible to disprove $P$

It does not follow that

Probably $P$ is true
A diagnosis

As suppressed premises:

If we cannot prove \( P \), then \( P \) is not so.

(So if \( P \) is true, then we can prove that \( P \) is true)

If we cannot disprove \( P \), then \( P \) is true.

(So if \( P \) is false, then we can disprove \( P \).)
Truth ≠ our access to the truth

• What is so ≠ what we can show to be so
• What is not so ≠ what we can show not to be so
Examples

“You can’t say something doesn’t exist because there’s always a chance that it does exist but nobody has seen it. Therefore you can’t say something doesn’t cause cancer because there’s always the chance that it does cause cancer but it hasn’t shown up yet.”

Those scary, unmeasured, cases

“About 90 percent of the family day care in this country is underground. It’s not licensed, it’s not regulated, and you have to assume that a lot of it is very low quality. ...Research hasn’t gone into places that aren’t licensed and aren’t standardized, so I would have to guess that there are a lot of terrible things out there.”

Dr. Alfred Kahn, quoted in the New York Times, 3 September 1984
Dormitory examples

You cannot prove that God doesn’t exist; hence, my faith is unshaken.

Science understands very little about the mind. Who knows what its limits are? Magnetism, radio waves, and radioactivity all seemed to be occult forces before they were understood. So it’s not unreasonable to believe in extrasensory perception.
Some nearby inductions

Suppose one can plausibly show that if there were any evidence in favor of P, it would be available by now.

For example, medical therapies that can be shown to be effective for common conditions are enormously profitable.

So, probably, if there were any good evidence for the effectiveness of chiropractic manipulations for back pain, it would be available by now.
A reasonable induction?

There has not been a single well-controlled double-blind study which shows that spinal manipulation has any curative effect on any disease.

(Suppressed): If spinal manipulation did cure disease, its curative effect would have been documented by now.

Ergo, spinal manipulation probably does not cure any disease.
Difference from *ad ignorantium*

- the additional premise is essential
- the conclusion is expressed probabilistically
Final Comments

To prepare for the Unit 6 test:

First: Make sure you know *all* of the various fallacies in the “family tree”. (Good exercise: Try to list them all, as they’re listed in the “decision tree” in the textbook, unit 6, p 8.)

Second: Practice! Go through as many examples as you can find, and try to spot the fallacy!
When looking for fallacies, usually it’s easiest to scan in the following order:

- Look first for *formal fallacies*
- Next, look for *vacuous arguments*
- Next, look for *shifts in meaning*
- Finally, look for *fallacies of relevance*

See pages 6.9 - 10 of the course pack.
Name the fallacy that the passage most clearly commits

• There should be evidence in the passage sufficient to convict the author of the fallacy in question

• Sometimes there is more than one possible correct answer
  – Name the one in which it would be easiest to get a conviction.
  – One answer should stick out like a sore thumb. It is blatant and unarguable. That’s the only one you need to name.
In the answers to exercises I sometimes give more than one answer. Don’t let this confuse you. It just means that the passage arguably commits several fallacies, and several answers might be equally acceptable. Naming any one of them will do. You only need to worry if the fallacy you name is not on the list at all.
In terms of ease of recognition:

1. Formal fallacies
2. Vacuous arguments. P therefore P.
3. Shifts in meaning. A word does not mean the same thing in premise and conclusion.
4. The various fallacies of relevance.
   – Look for these last!
1. (Formal) Does the form of the argument match any of the six forms?
   - modus ponens *
   - affirming the consequent
   - modus tollens *
   - denying the antecedent
   - disjunctive syllogism *
   - affirming a disjunct.

• If so, figure out which one. Three of them (*) are valid. Name it and STOP
2. (Vacuous) Look carefully at the conclusion of the argument. It should take us beyond the premises to some claim relevant to the discussion at hand. If not we have a **vacuous argument**: a collection of claims which don’t get us anywhere.

   a. Does the premise of the argument mean the same thing as the conclusion? The argument is of the form “P, therefore P”.
      
      It is **begging the question**. STOP.

   b. Does a premise of the argument *presuppose* the conclusion? (ie, is plausible only if you already accept the conclusion?)
      
      This argument also is **begging the question**. STOP
3. (Shift in meaning) Is there some word that occurs in both the premise and the conclusion, but whose meaning shifts in between? If yes: you have a “fallacy of clarity”. Ask

a. Do we argue from part to whole, or from whole to part? Then just ask which way the shift goes. From part to whole: composition. STOP From whole to part: division. STOP

b. Are there two distinct dictionary definitions for the word, which both get used? The word is ambiguous. These resemble puns. Equivocation. STOP.

c. Is the word not ambiguous, but vague? Does the argument exploit the small differences between items in the gray zone to conclude that there is no difference between the extremes? If yes: slippery slope. STOP
4. Relevance

These all employ an *irrelevant* emotional appeal.

Sometimes what sounds like emotional language *is* relevant. It might be *modus ponens*!

So: Check all the other stuff *first*. 
The various kinds of logically irrelevant (but psychologically potent!) grounds cited

- **ad hominem:** disparaging or attacking the person, rather than the grounds for his or her statements
- **authority (ad verecundiam):** relying on trust in an authority-figure
- **force (ad baculum):** a threat that something nasty will happen if one does not adopt the conclusion
- **ignorance (ad ignorantium):** citing our inability to know something as grounds for a conclusion
- **pity (ad misericoriam):** a description of something sad that will happen if one does adopt the conclusion
- **to the people (ad populum):** citing the popularity (or lack of it) as grounds for the truth (or falsity) of a conclusion
a. Does the passage attack the personal character of the arguer in a way which is irrelevant to the grounds for believing that arguer’s conclusion? The latter clause is critical.
If both are found: ad hominem. STOP.

b. Does the passage rely on the testimony of some expert in domain P for a conclusion about some distinct domain Q?
You need to find someone who is thought of as an expert, or is widely respected on one subject; and find the conclusion is about some other subject matter.
If yes: appeal to authority. STOP.
c. Does the argument use our inability to prove that ~P as the grounds for believing that P? If yes: **argument from ignorance**  
**Caution:** it might be modus tollens, so be careful!

d. Does the argument cite the *popularity* of a given view as grounds for its *truth*?  
Everybody believes it (or most everybody believes it), therefore it is true.  
Invalid!  
If yes: **appeal to the people**
e. Does the arguer threaten retaliation, violence, or something nasty if you do not “accept” the conclusion?
If yes: **appeal to force**

f. Does the argument do nothing more than try to arouse feelings of pity?
Point out the nasty consequences of a conclusion as the *only* reason for thinking it cannot be true.
If yes: **appeal to pity**
Some sample test items

1. If Nader were honest about campaign finance reform, then he would release his own financial records. But he refused to release his financial records. Hence he is not honest about campaign finance reform.

2. Global warming probably is due to industrial and automobile fossil fuel emissions. Kevin Costner, star of *Dancing with Wolves*, said so on *Entertainment Tonight*. 
3. Science can’t explain why Tiny Tim’s cancer suddenly went into remission. It cannot prove that the “laying on of hands” does not cure cancer. So probably the faith healer is tapping spiritual energies of some sort.

4. Dan Burton’s campaign finance committee hearings should not be taken seriously, since Burton is a partisan Republican, and he has been charged himself with taking illegal foreign money.
5. If God is all-powerful and good then the abuse and murder of children must serve a higher good. God is all-powerful and good. Hence the abuse and murder of children must serve a higher good.

6. The major political parties are controlled by the wealthy, because the people that run them are rich.

7. The line between pornography and socially valuable erotic art is difficult to draw. Different people draw these distinctions in different ways, depending on their values and upbringing. So pornography cannot be legally defined.
End of philosophy and logic!