Review: The goal of the course is to learn how to provide valid arguments for (moral) value claims.

Claim: A claim is a statement about how things are, and is typically expressed by a sentence in the indicative mood.

This means that it makes sense to preface an indicative mood sentence by the locution: "It is true/false that"

An *empirical* claim is a claim whose truth or falsity can be determined (if at all) by empirical methods.

e.g. "Large amounts of Vitamin D prevent cancer"

A conceptual claim is a claim whose truth or falsity can be determined (if at all) by pure reason (logical/conceptual) methods.

e.g. "Every even number greater than 2 can be written as the sum of two prime numbers"

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Do empirical claims *also* require conceptual or logical methods to determine their truth?

A value claim is a claim whose truth of falsity requires not only empirical and conceptual methods, but also value principles.

e.g. "It was wrong for Pinochet to torture dissident Chileans"

Argument: a set of statements (premises) given to prove another statement (the conclusion).

Practical syllogism: an argument in support of a value claim (value judgement)

Valid argument: An argument such that, *if* all the premises are true, then the conclusion *must* be true (or, *cannot* be false)

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Examples of valid arguments:

1. All pigs can fly.
2. Pee Wee Herman is a pig.
3. ?.

1. If Pluto is a dwarf planet, then it is a celestial body orbiting the Sun that is massive enough to be rounded by its own gravity but which has not cleared its neighbouring region of planetesimals, and is not a satellite.
2. Pluto is a dwarf planet.
3. ?

1. Either Kantianism or Rule Utilitarianism is correct.
2. If Kantianism is correct, we ought to keep our promises.
3. If Rule Utilitarianism is correct, we ought to keep our promises.
4. ?

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Arguments don't need true premises or a true conclusion to be valid (recall the "Pee Wee argument above).

What makes them valid is that *IF* the premises are true, *THEN* the conclusion **cannot** be false (**must** be true).

More samples:

1. All things made of cheese are completely edible.   T/F?
2. The moon is made of (green) cheese.   T/F?
3. The moon is completely edible.   T/F?

Valid?

1. No astronauts wear diapers.   T/F?
2. Lisa Nowak is an astronaut.   T/F?
3. Lisa Nowak doesn't wear diapers. T/F?

Valid?

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1. Some people are left-handed. T/F?
2. Babe Ruth is a person.   T/F?
3. Babe Ruth is left-handed.   T/F?

Valid?

1. If Santa Claus exists, he works for Zellers. T/F?
2. Santa Claus exists.   T/F?
3. Santa Claus works for Zellers.   T/F?

Valid?

1. Killing people to push through an economic system is always acting wrongly. T/F?
2. Both Stalin and Pinochet killed people to push through an economic system.   T/F?
3. Both Stalin and Pinochet acted wrongly.   T/F?

Valid?

SOUND ARGUMENTS: *Sound arguments* are valid arguments whose premises are actually true.

What is the truth value (i.e., true or false) of the conclusion of a sound argument? Why?

Our goal: We seek *sound practical syllogisms* because their value judgements are true, and we are also justified in believing them to be true

Determining validity: We won't spend much time on methods for determining validity. Mostly, you'll have to rely on your "native logical sense" to help you.

Still, one powerful technique is to note the "pattern" of the argument. Generally speaking, arguments with the same pattern have the same logical nature: they're all valid or invalid.

Examples:
1. If you're going to San Francisco, you should wear flowers in your hair.
2. <u>You're going to San Francisco.</u>
3. You should wear flowers in your hair.

Pattern? (Called *modus ponens*)

1. If P, then Q
<u>2. P</u>
3. Q

P, Q, R, … refer to complete indicative sentences (claims)

Some other patterns:

1. If P, then Q (Called *modus tollens*)
<u>2. Not Q</u>
3. Not P

1. If it is a good month, then I'll lose 5 kg.
<u>2. I won't lose 5 kg.</u>
3. It isn't (won't be) a good month.

Disjunctive syllogism:

1. P or Q	1. P or Q
<u>2. Not P</u>	<u>2. Not Q</u>
3. Q	3. P

1. The sample is contaminated or OJ did it.
2. OJ didn't do it.
3. The sample is contaminated.

Hypothetical syllogism:

1. If P then Q
2. If Q then R
3. If P then R

1. Pluto is not a planet or Ceres is a planet.
2. Ceres is not a planet.
3. Pluto is not a planet.

Example:
1. If we find life on Mars, life arose independently at least twice.
2. If life arose independently at least twice, human beings are not alone in the universe.
3. If we find life on Mars, then human beings are not alone in the universe.

Constructive dilemma:

1. P or Q
2. If P then R
3. If Q then R
4. R

Patterns with "categories": Categories are groups or set of things: e.g., dogs, cats, left-handed people, things that go bump in the night

One valid categorical syllogism pattern

Barbara (1)
1. All A are B
2. All B are C
3. All A are C

Example
1. All LIBS 7002 students are going to do well on the counterexample quiz.
2. All those who are going to do well on the counterexample quiz are contrary people.
3. ?

A = LIBS 7002 students
B = those who are going to do well on the counterexample quiz
C = contrary people

We use A, B, C, … to refer to categories

Barbara (2)
1. All *A* are *B*
2. *x* is an *A* .
3. *x* is a *B*

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

Invalid arguments:

Your second quiz will ask you to recognize whether sample arguments are valid or invalid.

If an argument is **valid**, say so, and give its name (if you remember it: bonus 1 mark)

If an argument is **invalid**, you will be asked to give and explain a "counterexample." (Two of these have names: if you remember them, you also get a bonus of 1 mark)

One way to show that an argument is invalid is to imagine a situation in which all the premises are true, but the conclusion is false

Example
1. If it's raining, then the sidewalks are wet.
2. The sidewalks are wet.
3. It's raining.

Proof by counterexample: We describe a possible situation in which the premises are all true, but the conclusion is false.

This shows the argument is invalid, since a valid argument **must** have a true conclusion, if its premises are all true.

(1) is usually true (unless the sidewalks are coated or under cover), so this is easy to imagine.

We can also easily imagine (2) that the sidewalks are wet.

Given that both premises are true, is it now *possible* that the conclusion is FALSE, that is, that it's NOT raining?

Some other examples:

1. All humans are mammals.
2. Some mammals walk on four legs.
3. Some humans walk on four legs.

Counterexample?

1. No humans are more than 1000 kg.
2. Some creatures that are more than 1000 kg. are not mammals.   .
3. Some mammals are not human.

Counterexample?

1. If Wimpy is hungry, then he will eat.
2. Wimpy is not hungry.
3. Wimpy will not eat.

1. Some women are left-handed.
2. All left-handed people chew gum.
3. Some women do not chew gum.

Counterexamples?

Two common invalid argument patterns

A. Denying the antecedent
1. If P, then Q
2. Not P
3. Not Q

1. If tomorrow is Sunday, then I'll go for a walk.
2. Tomorrow is not Sunday.
3. I won't go for a walk.

B. Affirming the consequent
1. If P, then Q
2. Q
3. P

1. If tomorrow is Sunday, then I'll eat.
2. I will eat.
3. Tomorrow is Sunday.

Recall the general pattern for practical syllogism

Empirical/conceptual claims
Value principle.
Value conclusion.

Recall also that we seek *sound* arguments (valid arguments with true premises)

So, to evaluate arguments for soundness, we need to:

1. Check the truth of the empirical/conceptual premise(s)
2. Check the truth of the value principle(s).
3. Check whether the argument is valid (does the conclusion *follow* from the premises?)

Resolving moral problems: (Checking the empirical, conceptual, and moral Issues)

The case of James, the chemical engineer: James agreed that when he changed jobs, he would keep confidential any proprietary information which he acquired at Company A.

At B, James is asked to work on Compound X, a new emission, which is not regulated by the EPA, though it's not clear if it is harmful

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James realizes that some of the proprietary information from A could be adapted so that Compound X would not be produced

   This information would be used by B in an entirely different way than by A, and wouldn't harm A's competition with B

   Does James *still* need permission to use the information?

Empirical issue: *having to do with the truth of empirical claims.*

   Is Compound X really a health hazard?

   How would an answer to this question affect any moral issues regarding Compound X? (i.e., not just copyright)

Conceptual issue: *having to do with the meaning or scope of a term or concept.*

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E.g., would using information from Company A on the new problem at Company B *truly* be misusing proprietary information?

To solve this we need a good definition for "proprietary information"?

How would an answer affect the moral issues?

Other examples: Is the foetus a "human person"?

Practical syllogism:
1. It is always wrong to kill an innocent human person. (VP)
2. The foetus is an innocent human person. (CP)
3. It is always wrong to kill a foetus. (VJ)

How does the definition of "foetus" affect this argument?

Genuine moral issue: involving the relevance or application of one or more moral principles.

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Broad sense of "moral issue": all the empirical, conceptual, and moral issues in a case

Narrow sense: only the relevance of a moral principle (or principles) or its application to the issue.

Resolving empirical issues: by empirical research.

Resolving conceptual issues: by determining the proper definition or scope of a term.

Resolving moral issues: by finding the proper application of one or more moral principles.

In practice, it may be difficult or impossible to resolve any of the above issues: e.g.,

(a) the health consequences of Compound X may be difficult or impossible to predict

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(b) the appropriate use of "proprietary" may be difficult to resolve for this case, or

(c) the relative importance of different moral principles may be hard to settle.

Relevance and Conflict Problems

Relevance problems occur when we are not sure whether a moral principle applies in a particular situation because we are not sure whether a concept *truly* applies in the situation

e.g. Does James's use of the process from A to the new situation in B amount to theft of *proprietary information*?

If James's use was not theft of proprietary information, then the moral principle against theft would not apply in this case

We resolve this relevance problem by clarifying the definition of "proprietary"

Resolving Relevance Problems (Casuistry)

Relevance problems arise in cases where the application of a concept is unclear

So, it makes sense to look at cases where the concept's use is clear, and then compare the similarities and differences between the clear and unclear cases.

Positive paradigm case: a case where the concept very clearly applies (e.g. a clear case of theft of proprietary information)

Negative paradigm case: a case where the concept very clearly does not apply.

Intermediary cases: We start with cases only slightly different from the positive paradigm case and ending with cases only slightly different from the negative paradigm case.

One of these intermediary cases should be the case in question, which we can call the ***test case***

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P o s i t i v e                                    Negative
Paradigm          Intermediate   Cases           Paradigm
Case                                              Case

   C-P+       C-1   C-2    C-3   C-4   C-5          C-P-
```

Suppose C-3 is the test case.

List the morally relevant similarities and differences among the various cases

E.g. does the use of the information give Company B a competitive edge over Company A?

Why is this morally relevant?

Determine the boundaries of the concept: e.g. what should and should not be proprietary.

We may need a conventional choice (e.g. night begins at sunset, 6 p.m., etc.)

Resolving Conflict Problems: *Conflict problems* occur when two or more principles seem to apply to a particular situation, but the principles require different and incompatible actions.

Two Engineering Ethics Principles:
(1) "Engineers shall hold paramount the safety, health and welfare of the public in the performance of their professional duties."

(2) "Engineers shall act in professional matters for each employer or client as faithful agents or trustees."

The case of Sue, the engineer: It seems her obligation to the public conflicts with her obligations to her employer and fellow employees.

Important: Conflicts between competing *obligations* are not between good and bad choices, but between competing goods, both of which cannot be fully realized.

Ways to Resolve Value Conflicts:

A. Finding the Creative Middle Way: Try to satisfy both values, in a modified form.

> Most general moral rules tacitly imply an "all other things being equal" (*ceteris paribus*) qualifications.

>> e.g., "All other things being equal, engineers shall hold paramount the safety, health and welfare of the public in the performance of their professional duties."

But suppose the threat to the safety, health and welfare of the public is both uncertain and minimal. Suppose also that the obligation to the community includes an obligation to its economic well-being.

> Then following the rule to be a faithful agent and trustee does not actually conflict with the rule to protect the public.

> Similarly, to act as "faithful agents and trustees" of one's employer doesn't mean an engineer must obey the employer no matter what this involves

The most obvious criterion: The employee has an obligation to perform their job at work and not to do in their private life what interferes in a clear and direct way with on-the-job performance, *unless* a violation of an obligation to the public is involved

> So, if a product is a serious threat to the safety and health of the public and the employer orders the engineer to conceal this information, the engineer should disobey the employer, even if the employer is not breaking any law by concealing danger

(B) Employing Lower-Level Considerations: If the force of the moral principles are evenly balanced, and both values can't be satisfied, sometimes lesser factors can "break the tie"

> e.g., the affect on Sue's career and her fellow employees' jobs can become decisive

(C) Making the Hard Choice: Sometimes one cannot resolve opposing principles, or use lower level considerations: One principle clearly trumps another.

> e.g., Sue may not be able to settle with her bosses, and the public risk may be too severe; so she may have to see the government

Evaluating value principles (from "Value Reasoning")

Role Exchange Test:

Would we judge an action or policy the same way (even) if we were the ones most hurt by it?

> "How would you like that done to you?"

Careful: The question is not whether you would *like* the action to be taken against you, but whether you would *regard it as right*.

That is, would the action or policy be *fair* for *any person* hurt by the action or policy (*including me*)

> e.g., I might not *like* getting a ticket for speeding, but might still agree that ticketing any speeder, *including me*, is the *right* thing to do.

The steps in the role-reversal test are:

> (a) Identify those significantly affected by the action or policy being evaluated.

> (b) Imagine what it would be like for *you* to experience the consequences of the action.

> (c) Consider whether it would be *right* for the other person to take the action if *you* received the consequences.

> (d) Reconsider your original judgement if you cannot accept it as right after (c) above.

(d) is based on a logical point. If your original argument for a value conclusion was based on an incorrect principle, this does not necessarily mean the conclusion is false

Perhaps the conclusion is right, but for other reasons

Universal Consequences Test: This test can be stated in many ways:

"What would happen if everybody did that?"

"If everybody did that, the consequences would be disastrous."

"How would you like it if everyone did that?"

This reasoning is based on:

(i) we think an action is wrong if it has bad consequences. So,

(ii) if the consequences of everyone's doing an action are bad, then *not everyone* has the right to engage in the action.

Note: It *may* be all right for *some* people to perform the action *sometimes*.

When?

The principle of respect for persons (in Chapter 2) requires that we are not arbitrary: Everyone should be treated the same, *unless there are good reasons for treating them differently.*

Thus the Universal Consequences Test says that, where not every person has the right to act in a certain way, then no one has the right to engage in the action, *without good reasons or justification* that would themselves apply to everyone in the *same* situation

The UCT is often used in situations where one person tries to gain an advantage over others

Basic steps in the Universal Consequences Test:

(a) Imagine the consequence if everyone who is likely to want to perform the same action for the same reason were to do so.

(b) Consider whether the imagined results are acceptable, desirable, good, etc.

(c) If the results are unacceptable, conclude that the action is wrong, or find (and evaluate) a new reason to support your action and test the new reason.

Next Week:
1. First quiz in first 30 minutes of class.
2. Read Lecture 3 notes + "Accepting gifts and amenities":
http://ethics.tamu.edu/ethics/giftgive/giftgiv1.htm
3. Case: Napster's, Grokster's…Revolution (text, p. 148).
Bring worksheet (I will email this and upload it onto Shareout).

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