1.   Cognition

Motivating questions of epistemology: How can we engage in sophisticated thinking and arrive at
knowledge that is used to direct both everyday and highly complex activities? What makes
human beings rational?

2.   Skeptical Problems

How is knowledge possible at all?

Several varieties of *skeptical arguments* assert that knowledge (of one sort or another) is impossible.

2.1.   External world (Cartesian) skepticism

C1.   If I know that I have hands, then I know that I'm not a handless brain in a vat.

C2.   I don't know that I'm not a handless brain in a vat.

C3.   ∴ I don't know that I have hands. (From C1, C2)

• Note that there's nothing special about the claim that *I have hands*; virtually any knowledge that
we have of the external world will be fodder for this skeptical argument.

2.1.1.   Moore's response to Cartesian skepticism

C1.   If I know that I have hands, then I know that I'm not a handless brain in a vat.

~C3.[1]   I know that I have hands.

~C2.   ∴ I know that I'm not a handless brain in a vat. (From C1, ~C3)

2.2.   Inductive (Humean) skepticism

H1.   The premises of an inductive argument do not logically entail the conclusion.

H2.   If the premises of an argument do not logically entail the conclusion, then it is not
reasonable to believe the conclusion on the basis of the premises.

H3.   ∴ It is not reasonable to believe the conclusions on the basis of inductive arguments.

2.2.1.   Objection to H1: Nature is uniform

Many inductive inferences have the following form:

1. a_1 is observed to be an F and a G.

2. a_2 is observed to be an F and a G.

        . . . [probably]

3.   All F's are G's.

Some critics of Humean skepticism claim that there is a hidden premise:

Principle of the Uniformity of Nature (PUN)*:* If all *observed F's* are *G's*, then all *F's* are *G's*.

As a result, there are no inductive inferences, only deductive inferences, so H1 is false.

The problem is that PUN is routinely false. (Swan example on p.9 of P&C)

2.2.2.   Objection to H2: Defeasible reasons

The premises of an argument can make a conclusion reasonable to believe so long as certain
undermining or 'defeating' evidence is absent.

3.   Knowledge & Justification

In addition to skeptical arguments, epistemologists offer *theories of justification*.

Some general features of justification:

• If you are asked, "How do you know that *p*?" Your answer will be your justification for believing
that *p*.

• A justified belief is one that is *epistemically permissible* to hold. Epistemically permissible beliefs are
those that contribute to the goal of seeking truth and avoiding error. Beliefs can be epistemically
permissible while also being *imprudent, immoral,* or *impractical* to hold.

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[1] Note: Tilde or "~" means "it's not the case that…" So, "~C3" means that "C3 is not the case" or
"C3 is false." I'll use this notation throughout the course.

3.1.   The Classical (pre-1963) Analysis of Knowledge

A person *S* knows that *p* if and only if:

1. *S* believes that *p*;
2. It is true that *p*; and
3. *S*'s belief that *p* is justified.

3.2.   Gettier problems

It is possible to have a justified true belief (JTB) that is the result of luck, and which will not count as knowledge. Hence JTB is necessary but not sufficient for knowledge.

*   Pollock & Cruz put this to the side; however, others have thought that Gettier problems should force us to revise our concepts of knowledge and justification profoundly.

4. Areas of Knowledge

There are many different sources of knowledge.

Perceptual knowledge: How can we acquire justified beliefs about the external world on the basis of the output of our sense organs? (Compare with Cartesian skepticism in §2.1.)

A priori knowledge: Knowledge justified independently of perception/on the basis of reason alone. (Ex. logic, mathematics.) Unlike perceptual knowledge, mechanisms for acquiring this knowledge are poorly understood (Is it merely knowledge of definitions/linguistic conventions? Does it involve some faculty of "rational intuition"?)

Moral knowledge: Similar problems as a priori knowledge.

Knowledge of other minds: We know our *own* minds because we have an intimate acquaintance with them. However, how do we know that other people have minds or what they're thinking?

Memorial knowledge: Much like visual representations, "apparent memories" play a role in our cognition. Under the right circumstances, this can furnish knowledge. What are the right circumstances? And is the analogy with vision an apt one?

Inductive knowledge: Recall than argument is *valid* if it is *impossible* that all of its premises are true and its conclusion is false. Valid arguments are *deductive*. Inductive arguments are slightly more modest: it is *improbable* that all of their premises are true when their conclusion is false. There are many kinds of inductive inference (enumerative, statistical, explanatory, causal...).

o   *First puzzle: Humean skepticism.* See §2.2 above.
o   *Second puzzle*: is induction a fundamental component of reasoning or derivative of more basic rules of inference?
o   *Third puzzle*: Goodman's new riddle of induction. The following is an acceptable inductive inference:

G1.   <u>All observed mice have whiskers.</u> [probably]
G2.   All mice have whiskers. (G1)

However the following is not:

G3.   <u>All observed mice-or-moose have whiskers.</u> [probably]
G4.   All mice-or-moose have whiskers (G4)

Yet both are instances of the general pattern of inference:

<u>All observed *Fs* are *Gs*.</u> [probably]
All *Fs* are *Gs*.

So, we need to restrict *F* and *G* to the right kind of "projectable" predicates. However, a criterion of projectability is very hard to formulate.

5. Theories of Knowledge

A good deal of epistemology proceeds at a more general level, i.e. by looking at structural features common to the genus of knowledge without trying to analyze its specific species (perceptual, a priori, etc.) General theorists of knowledge disagree along several interesting dimensions.

5.1.   Doxastic theories

The more traditional, *doxastic theories* hold that the justification of a belief is a function exclusively of a person's other beliefs. Here is the argument:

D1.   For all persons *S* and propositions *p,* if *S* is justified in believing that *p*, then *S* must be able to cite his/her reasons for believing that *p*.

D2.   For all persons *S* and propositions *p* and *q,* if *S* is able to cite *q* as a reason for believing that *p*, then *S* believes that *q* (and also believes that *q is a reason to believe that p*.)

D3.   ∴ For all persons *S* and propositions *p,* if *S* is justified in believing that *p*, then *S* believes that *q*. (D1, D2)

- o   D3 is called the "doxastic assumption." More colloquially, it states that only a belief can justify a belief.

Doxastic theories come in two flavors:

- *Foundations theories* hold that some beliefs are self-justifying, and all others are justified insofar as they are based on these self-justifying or "basic" beliefs.

- *Coherence theories* hold that there are no basic beliefs; instead, a belief is justified insofar as it fits with the rest of one's beliefs. As a result, whole systems of beliefs are justified based on how well they hang together through relations of inference, explanation, etc.

5.2.   Nondoxastic theories

These theories deny the doxastic assumption: in addition to beliefs, other things contribute to the justification of a belief. However, there are two ways of challenging the doxastic assumption.

- *Internalist theories* hold that while *beliefs* are too narrow a basis for justification, the states must still be "internal" to the agent. A state is "internal" just in case an agent can (in principle) have conscious access to it. This will include, e.g., perceptual states that are not beliefs. Many internalists also subscribe to cognitive essentialism, i.e. that the process by which a belief is formed is intrinsically correct or incorrect. (paradigm examples: the rules of logic.)

- *Externalist theories* hold that even this broadening of internal states beyond beliefs is insufficient to capture the nature of justification. Certain "external" features, e.g. the environment one is in, and one's causal connections to that environment, are also essential for determining the justification of a belief. Externalists typically deny cognitive essentialism: a cognitive process may be correct or incorrect based on the environment in which it is deployed.