Handout #3: Gettier and Harman

1. Skepticism's Normative Import

Suppose we don't know any empirical propositions. What's the importance of that? Does it mean I shouldn't believe any such propositions, that I shouldn't assume their truth when acting, that I shouldn't assert any of them? Not unless I should only believe what I know, I should only base my actions on what I know, and I should only assert what I know.

Suppose I don't know any empirical propositions P1-Pn because my entire body of evidence could be had by me were I a BIV in a world in which P1-Pn are all false. Does that entail that I am not justified in believing P1-Pn? Only if something like the following is true:

> (JUST): One is only justified in believing a proposition P if one has evidence for P that one *couldn't* have were P false.

This conception of what one should believe (or what one is justified in believing) goes along with a natural conception of knowledge as justified true belief. (K=JTB.) One fails to know that one has hands even if one remains convinced that one has hands and even if it is true that one has hands because one isn't *sufficiently justified* in believing that one has hands. To be sufficiently justified in believing the true proposition in question, one's having one's evidence for believing that one has hands must be incompatible with one's not having hands.

Questions: Is JUST right? *Could* both it and empirical skepticism be right, or do we know *a priori* that at least our basic perceptual beliefs are justified? Has the skeptic shown that we should all stop believing that we have hands?

2. The Gettier Problems

Gettier argues that knowledge does not equal justified true belief because JTB is insufficient for knowledge. His argument for this claim is extraordinarily compelling. Its only real assumption is that some very simple valid deductions preserve justification.

1. Jones is the man who will get the job and he has ten coins in his pocket.
2. The man who will get the job has ten coins in his pocket.

3. Jones owns a Ford.
4. Jones owns a Ford or Brown is in Barcelona.

As Gettier describes the case, (2) and (4) are both true, Smith is justified in believing them because he has inferred them from propositions he is justified in believing ((1) and (3) respectively), but Smith neither knows (2) nor (4).

3. Harman's Solution: No False Lemmas

> Principle P: Reasoning that essentially involves false conclusions, intermediate or final, cannot give someone knowledge.

Harman's analysis of knowledge*:* S knows p just in case S is justified in believing P, P is true and S either knows P directly or has inferred P from true propositions (that she is justified in believing).

The Initial Strategy: Harman tries to argue against purely probabilistic "rules of acceptance" on the grounds that they cannot use Principle P to solve the Gettier problems in the manner in which he solves them.

4. Preliminaries

In confirmation and decision theory probability is typically taken to be "subjective" in that the probability of a given proposition is relativized to a given person (or rational agent) and is characterized as the degree to which the person believes the proposition (insofar as she is rational). The initial degrees of "rational" belief are just assumed as given. You can think of them as having their source in genetics and enculturation. Decision and confirmation theory then specify the degrees to which the person who begins with these degrees of believe *must* believe further propositions to varying degrees—including the degree to which the person must believe a given proposition P when she is assuming some further proposition Q (i.e. Prob P|Q)—insofar as she is rational. Prob P|Q is described as a "conditional probability."

Harman's initial question: How certain must one be of a proposition (what degree of conviction must one invest in it) for it to be truly said that you **simply** believe it?

The Paradox of the Preface: I write a long book and admit in the preface that the book surely contains an error. But of each claim I make in the book it is true that I believe it outright. I believe what I say in the preface and I believe what I say throughout the book's text. (My sincerity is not in question.) But at least one of these beliefs must be false (if only the belief expressed in the preface that the book contains some error). So by sincerely saying what I do in the preface I express a set of contradictory beliefs. I know a priori that at least one of the beliefs I express in my long book must be false.

Harman's response: "It is not obviously irrational to have inconsistent beliefs even when we know that they are inconsistent." *Questions*: Is this right? If so, what does this realization imply for the relationship between logic and epistemology?

Kyburg's Lottery Paradox: Take a fair lottery with a billion tickets. Suppose we allow that it is rational to believe of each ticket holder TH_1-TH_n that he won't win. (After all, his chances of winning are so small; his odds are a billion to 1.) But then, if we put your belief that TH_1 won't win, your belief that TH_2 won't win. . .and your belief that TH_n won't win together with your belief that *someone* will win, we can derive a contradiction. (The propositions you believe in this case form an inconsistent set.) Isn't it irrational to believe *this* contradiction? (Despite what he says about the paradox of the preface, Harman thinks adopting all these beliefs would be irrational.) So which belief or beliefs must you abandon in the case?

> **Rule S**: You should only accept a hypothesis H if the total set of propositions you would then believe {P1-Pn, H} has a sufficiently high probability (say .99).

Question: Does Rule S really solve the paradox? As Harman says, it allows you to believe of many of the participants that they won't win the lottery just so long as you don't extend this reasoning to too many of them. But (given the fairness of the lottery) aren't the same reasons you have for believing one of them won't win also applicable to each of the others? What makes it rational then to believe of TH_1 that he won't win but to not believe this of TH_n? (Is it the fact that by the time you get to TH_n you *already* believe TH_1won't win, coupled with the fact that you believe this of sufficiently many other tickets you've already encountered? But then why don't you accept that TH_n won't win and abandon your belief that TH_1 won't win?)

Harman's Response: Rule S does solve Kyburg's lottery paradox, but it doesn't "fit" with the use of principle P in the resolution of the Gettier problems because, "Reasoning in accordance with a purely probabilistic rule involves essentially only its final conclusions."

> "If there were probabilistic rules of acceptance, there would be no way to exhibit the relevance of Mary's intermediate conclusion. For Mary could then have inferred her final conclusion (that one of her friends owns a Ford) directly from her original evidence, all of which is true. . .The intermediate conclusion would not be essential to her inference, and her failure to know that one of her friends owns a Ford could not be explained by appeal to Principle P."

We want to say that Mary does not know that one of her friends owns a Ford even if she concludes this directly upon receiving the (misleading but true) evidence that Nogot said he owns a Ford, Nogot showed her his title to the car, etc.. But there are no false premises in such an inference and the conclusion is highly probable on the evidence. We then have JTB plus satisfaction of principle P but no knowledge if following rule S is sufficient for justification. *If Harman is right that once we add principle P to JTB we therein obtain conditions that are sufficient for knowledge* then we must abandon the view that reasoning in accord with S is sufficient for justification.

Another response to Gettier Problems: "Knowledge first" epistemology. For example, Timothy Williamson argues that 'knows' cannot be defined or analyzed (except insofar as it is equated with the most general kind of truth or fact involving state of mind).

5. Causal Theories

> Goldman: S knows that p just in case S's belief that p is appropriately caused by the fact that p.

<u>What is "appropriate" causation</u>? Examples: (1) Perceptual causation of belief by current fact; (2) Current memory caused by past fact; (3) common causation of belief in current fact and current fact by past fact.

Question: How does Goldman's theory resolve the Gettier cases?

<u>Problems for Goldman's Theory</u>: (1) universal generalizations. How do I know that all emeralds are green when my belief that all emeralds are green isn't caused by the fact that all emeralds are green? Solution: Count logical relations. The evidence that all emeralds are green (namely, the fact that all emeralds so far observed have been green) causes the belief and is entailed by the proposition believed. (2) A priori knowledge. How can the fact that 2+2=4 cause anything? It's too abstract.

6. Specifying "appropriate" causation

<u>*Laurence Bonjour's clairvoyant*</u>: Does the clairvoyant know even though she has absolutely no evidence or reasons she can cite for her belief?

Goldman says: "The relevant causal connections must be reconstructed in the inference."

Harman reads this as saying that to know that p the subject must be caused by the fact that p to believe that p and she must somehow infer something about how her belief in p was caused by her appreciation of the evidence for p. But what must she infer about this connection? *Note: Goldman nowhere says anything about this higher-order requirement*.

A Humean Theory of Non-Deductive Inferential Knowledge: In order for S to know any contingent proposition Q the truth of which she cannot directly observe, remember or introspect, S must infer the truth of Q from: (a) some propositions P1…Pn that she knows via observation memory, or introspection, and (b) the proposition that Q caused P.

<u>Question</u>: Can you provide some counterexamples to the Humean Theory?

7. Inference to the Best Explanation or Abduction

***Inference to the Best Explanation*:** In order for S to know any contingent proposition Q the truth of which she cannot directly observe, remember or introspect, S must infer the truth of P from: (a) some propositions P1…Pn that she can observe, remember or introspect, and (b) the propositions that the truth of Q provides a *better explanation* of P1…Pn than any competing explanation.

An Example of Knowledge Via Inference to the Best Explanation: "I infer that doctors have generally been right in the past when they have said that someone is going to get measles because they can normally tell from certain symptoms that someone is going to get measles."

` ***A Reconstruction***:

(a) I know via memory that doctors' diagnoses of measles have been generally right in the past.
(b) I establish that the truth of the proposition that doctors can normally tell from certain symptoms that someone is going to get measles provides the best explanation for why doctors' diagnoses of measles have been generally right in the past.
(c) I conclude that doctors can normally tell from certain symptoms that someone is going to get measles.

Another example:

(a') I know via perception the proposition Q=that the ground is wet.
(b') I establish the truth of the proposition P=that it rained last night is the best explanation for the truth of Q.
(c') I conclude that it rained last night.

*Question*s: If all non-deductive knowledge of facts that can't be directly observed, remembered, or introspected are known via inference to the best explanation, does principle P provide a solution to Gettier problems? Is it true that S knows P just in case S has a true justified non-inferential belief or a true justified inferential belief arrived at without the acceptance of any false lemmas? How do we establish the second premise of an inference to the best explanation? Are facts about what is a good explanation of what knowable a priori? Can they be observed, introspected or remembered? If not, does Harman's claim that all inferential knowledge consists in inference to the best explanation lead to an infinite regress or some degree of circularity?

8. Statistical Inference

Explanation and probability: I know I have one fair coin in my pocket and one coin weighted to heads. I flip one of the two coins 10,000 times. It comes up heads 4,983 times and tails 5,017. My inference:

(a) I observe 4,983 heads and 5,017 tails.
(b) I establish that the hypothesis that I've been flipping the fair coin better explains the truth of (a) than does the hypothesis that I've been flipping the weighted one. I therein establish that the hypothesis that I've been flipping the fair coin is the "best" explanation for (a).

(c) I infer that I've been flipping the fair coin.

Harman notes that the probability of (a) on the content of (c) is pretty darn low. "We must agree that statistical explanation can cite an explanation that makes what it explains less likely than it makes its denial." But probability isn't entirely irrelevant here. The reason why the hypothesis that I've been flipping the fair coin better explains the truth of (a) than does the hypothesis that I've been flipping the weighted one is the following: the probability of (a)'s being true "conditional on" the truth of the hypothesis that I've been flipping the fair coin is significantly higher than the probability of (a)'s being true conditional on the truth of the hypothesis that I've been flipping the weighted coin.

9. Defeators

Unlike deductive entailment, explanation and confirmation are "non-monotonic."

$\Box$=Necessarily; $\Rightarrow$=entails; $\rightarrow$=if…then

$$\Box((A\Rightarrow P)\rightarrow(A\&B\Rightarrow P))$$

$$\neg\Box(\text{Prob}(P|A)>x\rightarrow\text{Prob}(P|A\&B)>x)$$

$$\neg\Box(A \text{ explains } P\rightarrow A\&B \text{ explains } P)$$

Barn Examples

See Harman's three examples: Tom, Donald and Jill. Here we have JTB but no knowledge. Don't we have JTB plus satisfaction of principle P but still no knowledge? Harman says not necessarily.

A First Pass: Inference involves belief that there is no evidence such that if one knew about the evidence *one would not be justified in believing one's conclusion*.

Two kinds of defeators: ***undermining*** and ***rebuttting***. Suppose one believes that P based on one's evidence E. An undermining defeator for one's belief that P is some proposition Q such that Q provides strong evidence that E is not good evidence for P. A rebutting defeator is some proposition R such that R provides stronger evidence for ¬P than E provides for P. For example, the fact that I just had an eye operation that makes everything look watery *undercuts* the evidential status of the proposition that the ground looks wet and so defeats the warrant that evidence would otherwise confer on my belief that it rained last night. The fact that someone just washed down the sidewalk and it has never rained in this city rebuts the evidence provided by the ground's looking wet as it provides stronger warrant against the proposition that it rained last night than is provided for that proposition by the ground's looking wet.

Harman claims that a tacitly believed premise affirming the absence of defeators is part of every knowledge-conferring inference.

Example:
(a') I know via perception the proposition Q=that the ground is wet.
(b') I establish the truth of the proposition P=that it rained last night is the best explanation for the truth of Q.
(c') I believe that there is no evidence out there such that if I knew of its existence I would not be justified in believing P.
(d) I conclude that it rained last night.

Question: Why does Harman believe that his First Pass is too strong? (See the revised examples involving Tom, Donald and Jill.)

Harman replaces it with:

> Q: One may infer a conclusion only if one also infers that there is no undermining evidence one does not possess.

Assignment: Describe the regress Harman thinks results if we insist that one must *first* establish that Q is satisfied before inferring the conclusion of an inference to the best explanation, then describe an inference that would fit the model Harman ends up with.