

# KI Package Y5, T1

## Knowledge and Justification

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Tutor: Mr Jarrod Lee

## Justified True Belief Exercise

This exercise will take us through a series of class activities to show the conditions a proposition would have to meet in order to be called knowledge. In other words, if I want to say that I know that X, where X is any proposition, what would X require?

### 1) The Belief Condition

For each of the following situations, discuss why we cannot speak of them as cases of knowledge.

- a) Suppose that Linh has a brother in Vietnam whom he hasn't seen or spoken to in months and that his brother is healthy and well. Suppose also that Vietnam was in Jan this year hit by SARS and that Linh hasn't been in touch with his family for a month because the phone networks and mail systems are down.

Why can Linh not say that he knows his brother is well? Would Linh accept it if attempting to ease him, you said, 'I'm sure your brother is well.'

- b) Suppose Mother Theresa has been brought up as a Christian and for that reason has always believed in God, and that there is in fact a God. Why may some people not want to say that they share Mother Theresa's knowledge that there is a God?

Now try to formulate a requirement for us to say that I know that X:

Try to think of counter-examples in which the above requirement you have just formulated may not really be necessary for knowledge.

## 2) The Truth condition

We can build further requirements for knowledge if we learn from history. The 2 theories below have more or less been debunked today.

### Flat Earth Theory

Main Claim: the Earth is flat, like a plane or disc

Reasons given	What are some reasons that suggest otherwise?
1) Rivers flow for hundreds of miles without falling more than a few feet (e.g. the Nile) but if the Earth is round, it should fall more than a few feet.	
2) Scripture: "I saw four angels standing on the four corners of the Earth" (Rev. 7:1).	
3) If the Earth were round, then the people on the other side are walking upside down.	

### Miasma Malaria Theory

Main Claim: Malaria is caused by bad air, emanating from rotting organic matter

[Note: "miasma" = "pollution" in ancient Greek, "malaria" = "bad air" in medieval Italian]

Reasons given	What are some reasons that suggest otherwise?
1) You can catch malaria without touching the sick	
2) Where malaria was found, bad air could be found	
3) Bad air arrives during mosquito seasons	

Why can we today not say that the flat-earth theorists *knew* that the earth is flat, or that Miasma theorists *knew* the cause of Malaria? What does knowledge require apart from belief? Try to formulate additional requirements for us to say that I know that X.

To complicate things a little, let us consider the following pieces of knowledge:

- 1) (Math) I know that a circle has exactly 360 degrees and has an area of  $\pi r^2$
- 2) (Economics) I know that in a market with perfect competition, the forces of demand and supply would lead to a completely efficient outcome, and prices would move instantaneously to equilibrium.

Would these two examples of knowledge meet the same requirements you have drawn up in reaction to the Flat Earth and Miasma Theories? How exactly would they meet these requirements? How do we determine if these pieces of knowledge are in fact true?

### 3) The Justification Condition

#### The Lucky Gambler

Consider a gambler who believes that the next number on the roulette wheel will be red. And it does turn out to be red.

Does he have knowledge in this instance?

Would it make a difference if he had knowledge that the roulette wheel was rigged to give red numbers? Why/ why not?

#### The All-Knowing Psychic

Suppose that a self-proclaimed psychic is able to predict unerringly (with no exceptions) international events that nobody else can, such as the day that a major war breaks out, the day that a new outbreak of Ebola virus occurs in Zaire, the date and hour of every earthquake of 8.0 strength or higher, and the date and strength of hurricanes that even meteorologists are unable to predict.

Would you say that she *knew* that these things were going to happen? In other words, would you consider her predictions knowledge? Why / why not?

What does this suggest about knowledge?

### 4) In Closing

Through this exercise, we have seen how the three conditions of belief, truth and justification may be not just individually, but also jointly necessary for X to be called knowledge.

Use the following example to consolidate what you have learnt about the above three conditions.

A woman is asked on a television quiz programme, "In what year did George Washington die?" She says, "1799," the correct answer, and wins a new car.

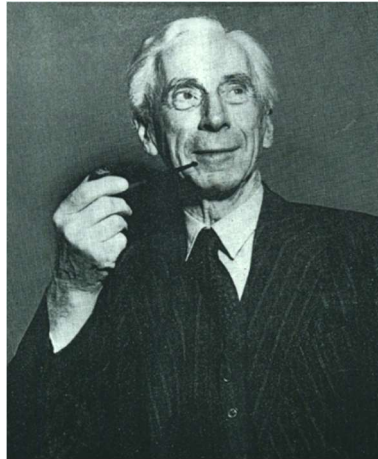
- 1) Would you say she knows the year in which George Washington died?
- 2) If 1799 was in fact the wrong year, would her knowledge still hold?
- 3) Would she know it because she remembered reading it in a history book?
- 4) Suppose she had read it in a history book, but wasn't sure she remembered it correctly at the time she gave the answer; did she know it?
- 5) Would she know it if she just happened to guess the right answer?

### **Reading: Russell's *Problems of Philosophy***

The following is an excerpt from chapter 13 of Bertrand Russell's *The Problems of Philosophy*. Here, he discusses some of the problems with defining knowledge as "true belief." How does this compare with what we have learnt about the conditions in Justified True Belief?

Originally published by Oxford University Press, the fulltext of Russell's book was put into hypertext by Andrew Chrucky in 1998 and is now public domain, available over the internet at <http://www.ditext.com/russell/russell.html>

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*Russell*

.... There can be no doubt that some of our beliefs are erroneous; thus we are led to inquire what certainty we can ever have that such and such a belief is not erroneous. In other words, can we ever know anything at all, or do we merely sometimes by good luck believe what is true? Before we can attack this question, we must, however, first decide what we mean by 'knowing', and this question is not so easy as might be supposed.

At first sight we might imagine that knowledge could be defined as 'true belief'. When what we believe is true, it might be supposed that we had achieved a knowledge of what we believe. But this would not accord with the way in which the word is commonly used. To take a very trivial instance: If a man believes that the late Prime Minister's last name began with a B, he believes what is true, since the late Prime Minister was Sir Henry Campbell Bannerman. But if he believes that Mr. Balfour was the late Prime Minister, he will still believe that the late Prime Minister's last name began with a B, yet this belief, though true, would not be thought to constitute knowledge. If a newspaper, by an intelligent anticipation, announces the result of a battle before any telegram giving the result has been received, it may by good fortune announce what afterwards turns out to be the right result, and it may produce belief in some of its less experienced readers. But in spite of the truth of their belief, they cannot be said to have knowledge. Thus it is clear that a true belief is not knowledge when it is deduced from a false belief.

In like manner, a true belief cannot be called knowledge when it is deduced by a fallacious process of reasoning, even if the premisses from which it is deduced are true. If I know that all Greeks are men and that Socrates was a man, and I infer that Socrates was a Greek, I cannot be said to know that Socrates was a Greek, because, although my premisses and my conclusion are true, the conclusion does not follow from the premisses.

But are we to say that nothing is knowledge except what is validly deduced from true premisses? Obviously we cannot say this. Such a definition is at once too wide and too narrow. In the first place, it is too wide, because it is not enough that our premisses should be true, they must also be known. The

man who believes that Mr. Balfour was the late Prime Minister may proceed to draw valid deductions from the true premiss that the late Prime Minister's name began with a B, but he cannot be said to know the conclusions reached by these deductions. Thus we shall have to amend our definition by saying that knowledge is what is validly deduced from known premisses. This, however, is a circular definition: it assumes that we already know what is meant by 'known premisses'. It can, therefore, at best define one sort of knowledge, the sort we call derivative, as opposed to intuitive knowledge. We may say: 'Derivative knowledge is what is validly deduced from premisses known intuitively'. In this statement there is no formal defect, but it leaves the definition of intuitive knowledge still to seek.

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[Source: <http://www.ditext.com/russell/rus13.html>]

### Questions

1. What is Russell's eventual/main conclusion here?
2. What are the ways in which a belief is not the same as knowledge?
3. What is the problem with defining knowledge as that which is "validly deduced from true premisses"?
4. Reconstruct Russell's argument in an arrow diagram.

## **Reading: The Gettier Problem**

Before Gettier's essay below was published, most analytic philosophers took it for granted that something we might call the JTB account of knowledge was correct. The JTB account claims that knowledge can be conceptually analyzed as justified true belief. But Gettier came along and seriously called JTB into question. See if you agree with him.

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**Gettier**

### ***Is Justified True Belief Knowledge?***

**Edmund L. Gettier**

**From *Analysis* 23 (1963): 121-123.**

**Transcribed into hypertext by Andrew Chrucky, Sept. 13, 1997.**

Various attempts have been made in recent years to state necessary and sufficient conditions for someone's knowing a given proposition. The attempts have often been such that they can be stated in a form similar to the following:<sup>1</sup>

- |                   |     |      |                                     |
|-------------------|-----|------|-------------------------------------|
| a. S knows that P | IFF | i.   | P is true,                          |
|                   |     | ii.  | S believes that P, and              |
|                   |     | iii. | S is justified in believing that P. |

For example, Chisholm has held that the following gives the necessary and sufficient conditions for knowledge:<sup>2</sup>

- |                 |     |      |                                |
|-----------------|-----|------|--------------------------------|
| b. S knows that | IFF | i.   | S accepts P,                   |
| P               |     | ii.  | S has adequate evidence for P, |
|                 |     |      | and                            |
|                 |     | iii. | P is true.                     |

Ayer has stated the necessary and sufficient conditions for knowledge as follows:<sup>3</sup>

- c. S knows that P    IFF    i. P is true,  
    ii. S is sure that P is true, and  
    iii. S has the right to be sure that P is true.

I shall argue that (a) is false in that the conditions stated therein do not constitute a sufficient condition for the truth of the proposition that S knows that P. The same argument will show that (b) and (c) fail if 'has adequate evidence for' or 'has the right to be sure that' is substituted for 'is justified in believing that' throughout.

I shall begin by noting two points. First, in that sense of 'justified' in which S's being justified in believing P is a necessary condition of S's knowing that P, it is possible for a person to be justified in believing a proposition that is in fact false. Secondly, for any proposition P, if S is justified in believing P, and P entails Q, and S deduces Q from P and accepts Q as a result of this deduction, then S is justified in believing Q. Keeping these two points in mind, I shall now present two cases in which the conditions stated in (a) are true for some proposition, though it is at the same time false that the person in question knows that proposition.

### Case I

Suppose that Smith and Jones have applied for a certain job. And suppose that Smith has strong evidence for the following conjunctive proposition:

- d. Jones is the man who will get the job, and Jones has ten coins in his pocket.

Smith's evidence for (d) might be that the president of the company assured him that Jones would in the end be selected, and that he, Smith, had counted the coins in Jones's pocket ten minutes ago. Proposition (d) entails:

- e. The man who will get the job has ten coins in his pocket.

Let us suppose that Smith sees the entailment from (d) to (e), and accepts (e) on the grounds of (d), for which he has strong evidence. In this case, Smith is clearly justified in believing that (e) is true.

But imagine, further, that unknown to Smith, he himself, not Jones, will get the job. And, also, unknown to Smith, he himself has ten coins in his pocket. Proposition (e) is then true, though proposition (d), from which Smith inferred (e), is false. In our example, then, all of the following are true: (i) (e) is true, (ii) Smith believes that (e) is true, and (iii) Smith is justified in believing that (e) is true. But it is equally clear that Smith does not *know* that (e) is true; for (e) is true in virtue of the number of coins in Smith's pocket, while Smith does not know how many coins are in Smith's pocket, and bases his belief in (e) on a count of the coins in



Jones's pocket, whom he falsely believes to be the man who will get the job.

### Case II

Let us suppose that Smith has strong evidence for the following proposition:

- f. Jones owns a Ford.

Smith's evidence might be that Jones has at all times in the past within Smith's memory owned a car, and always a Ford, and that Jones has just offered Smith a ride while driving a Ford. Let us imagine, now, that Smith has another friend, Brown, of whose whereabouts he is totally ignorant. Smith selects three place names quite at random and constructs the following three propositions:

- g. Either Jones owns a Ford, or Brown is in Boston.
- h. Either Jones owns a Ford, or Brown is in Barcelona.
- i. Either Jones owns a Ford, or Brown is in Brest-Litovsk.

Each of these propositions is entailed by (f). Imagine that Smith realizes the entailment of each of these propositions he has constructed by (f), and proceeds to accept (g), (h), and (i) on the basis of (f). Smith has correctly inferred (g), (h), and (i) from a proposition for which he has strong evidence. Smith is therefore completely justified in believing each of these three propositions, Smith, of course, has no idea where Brown is.

But imagine now that two further conditions hold. First Jones does *not* own a Ford, but is at present driving a rented car. And secondly, by the sheerest coincidence, and entirely unknown to Smith, the place mentioned in proposition (h) happens really to be the place where Brown is. If these two conditions hold, then Smith does *not* know that (h) is true, even though (i) (h) is true, (ii) Smith does believe that (h) is true, and (iii) Smith is justified in believing that (h) is true.

These two examples show that definition (a) does not state a *sufficient* condition for someone's knowing a given proposition. The same cases, with appropriate changes, will suffice to show that neither definition (b) nor definition (c) do so either.

### Notes

1. Plato seems to be considering some such definition at *Theaetetus* 201, and perhaps accepting one at *Meno* 98.
2. Roderick M. Chisholm, *Perceiving: A Philosophical Study* (Ithaca, New York: Cornell University Press, 1957), p. 16.
3. A. J. Ayer, *The Problem of Knowledge* (London: Macmillan, 1956), p. 34.

[Source: <http://www.ditext.com/gettier/gettier.html>]

## Discussion Questions

### 1) Consider this variation of the Gettier Problem:

Farmer Field is concerned about his prize cow, Daisy. In fact, he is so concerned that when his dairyman tells him that Daisy is in the field happily grazing, he says he needs to know for certain. He doesn't want just to have a 99 per cent idea that Daisy is safe, he wants to be able to say that he *knows* Daisy is okay.

Farmer Field goes out to the field and standing by the gate sees in the distance, behind some trees, a white and black shape that he recognizes as his favourite cow. He goes back to the dairy and tells his friend that he knows Daisy is in the field.

*(At this point, does Farmer Field really know it?)*

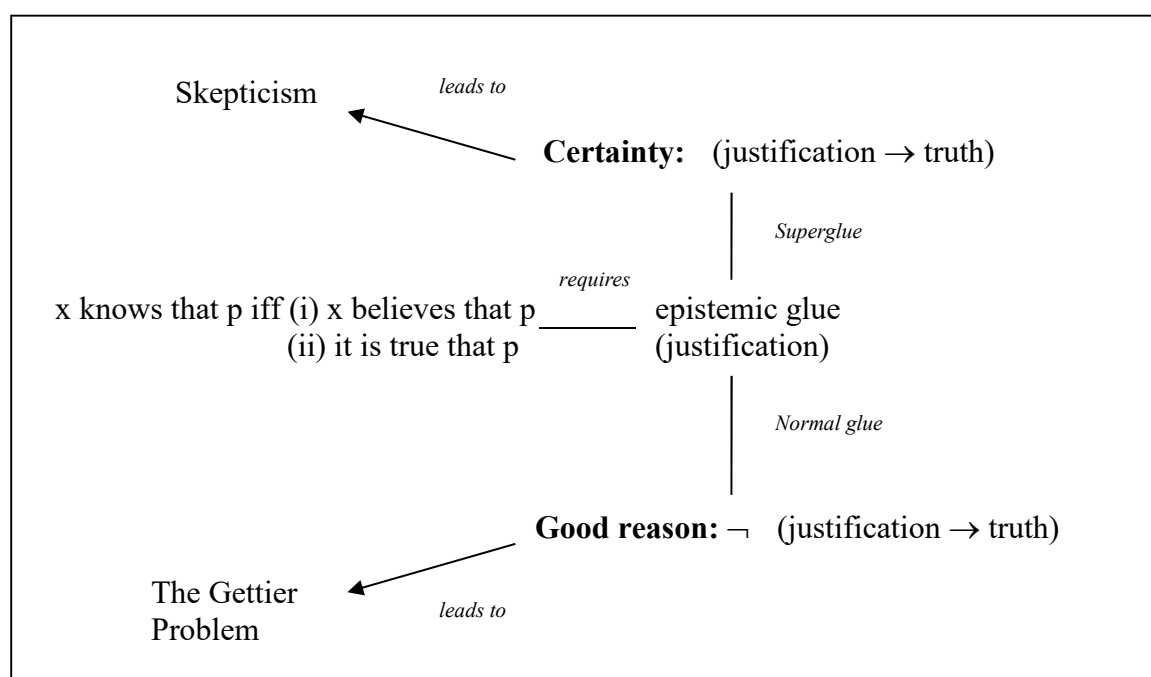
The dairy man, Farmer Field's assistant, says he will check too, and goes to the field. There he finds Daisy, having a nap in a hollow, behind a bush, well out of sight of the gate. He also spots a large piece of black and white paper that has got caught in a tree.

Daisy is in the field, as Farmer Field thought. But was he right to say that he *knew* she was?

*(Discuss again if Farmer Field was right.)*

*[Adapted from Cohen's 101 Philosophy Problems]*

- 2) To see if you have fully understood Gettier's point, see if you can construct an example (like this Farmer Field one) where you illustrate the Gettier problem.
- 3) What are your reactions to the Gettier Problem? Do you accept Gettier's argument?
- 4) One way to think of the Gettier Problem is as follows:



The diagram suggests that there are essentially two views on JTB: there are philosophers who prefer certainty in justification (who insist that our justifications must entail the truth of our beliefs) and those who require only mere justification for knowledge (who require merely a preponderance of the evidence, or good reasons for belief to become knowledge).

- a) The diagram suggests that the Gettier Problem only arises when people try to justify their beliefs with good reason instead of with absolute certainty. Do you agree?
  - b) For either route taken ('certainty' or 'good reason'), we are led to either a problem, or further skepticism. Where does this leave us as far as an understanding of what is knowledge?
- 5) With the Gettier problem, it became evident that the following three conditions were not jointly sufficient for knowledge:  
I know that  $p$  iff:  
1) it is true that  $p$   
2) I believe that  $p$   
3) I am justified in believing that  $p$

Some philosophers think that there is a need to add a 4<sup>th</sup> condition for knowledge. But they haven't been able to agree on what the 4<sup>th</sup> condition should be. If you were to add (an) additional condition(s) to JTB in order to circumvent the Gettier problem, what might these be? Your tutor will share some of the additional conditions suggested by philosophers after you have shared yours.

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