Chapter 1
The Concept of Knowledge

1) The concept of knowledge
What is it to know something? What is it, for instance, to know that snow is white? The question isn't asking how one goes about gaining knowledge of something. It isn't asking how one comes to know, for instance, that snow is white. Our question asks, rather, what it is that one has once one has gained knowledge of something. Better, it asks what it is that one would have were one to gain knowledge of something. The question what is it to know something asks about the nature of knowledge. To answer it we have to describe the concept of knowledge. We have to analyse that concept.

Here is a proposal to get us started.

If Sally knows that snow is white, then:

1) snow is white
2) Sally believes that snow is white
3) Sally is well justified in believing that snow is white

Generally, the proposal is this, where "S" is any subject and "p" is any indicative sentence expressing a proposition.

If S knows that p, then:

1) p (or: the sentence "p" is true)
2) S believes that p (or: S believes that the sentence "p" is true)
3) S is well justified in believing that p (or: S is well justified in believing that the sentence "p" is true.

The proposal, then, is that to know something is to be well justified in believing something that indeed is true. The proposal is that the concept of knowledge can be understood as involving three necessary conditions. The proposal is not, it should be noted, to be taken as a complete analysis of the concept of knowledge; it doesn't say everything there is to be said about the concept of knowledge. But if it is correct, then any instance of knowledge meets the three conditions listed.

Condition 1) is the truth condition; according to it, knowing that p requires that "p" be true. Condition 2) is the belief condition; according to it, knowing that p requires that one believe that p. Condition 3) is the justification condition; according to it, knowing that p requires that one have good reason for believing that p.

If S knows that p, then S is well-justified in believing that p and "p" is true. That, in short, is our proposed analysis.

2) Necessary and sufficient

Each of the three conditions in our proposed analysis is *necessary* (needed) for knowledge. That means that if one knows that p, then each of the three conditions is satisfied. It also means that if any one of the three conditions is not satisfied, then one doesn't know that p.

If Sally knows that snow is white, then, according to our proposed analysis, snow is white, Sally believes that snow is white, and Sally is well justified in believing that snow is white. As well, if snow is not white, or Sally doesn't believe that snow is white, or Sally lacks a good reason for believing that snow is white, then, according to our proposed analysis, Sally does not know that snow is white.

A condition is a *necessary* condition for something else to obtain when that condition must be present for that something else to obtain. So, if a necessary condition for something isn't present, then the something doesn't obtain. Oxygen, for instance, is necessary for fire. When something burns, oxygen is present. Moreover, wherever there is no oxygen, there is no fire.

A *sufficient* condition for something to obtain, on the other hand, is a condition that is enough for that thing to obtain. When a sufficient condition is present, whatever it is for which it is a sufficient condition will obtain. Heat is a sufficient condition for expanding an iron rod. As the iron rod gets hot, it expands.

On our analysis so far, the three conditions are given as necessary conditions. They are not given as sufficient. Maybe taken together the three conditions *are* sufficient for knowledge; we will investigate whether they are later. Right now we have only proposed that they are necessary.

Let us review the concepts of necessary condition and sufficient condition. A necessary condition for something is:

(N) a condition needed to be in place for something to obtain.

If A is a necessary condition for B, then without A, no B. The presence of fuel is a necessary condition for combustion; so, when there is no fuel there is no combustion.

A sufficient condition for something is:

(S) a condition that is enough for something to obtain.

If A is a sufficient condition for B, then when A is present, B obtains. Earning at least fifty points in this course is sufficient for passing this course; so, any person who earns at least fifty points in this course passes it.

"If Sally knows that snow is white, then snow is white and Sally is well justified in believing that snow is white." This sentence states that snow's being white, Sally's believing that snow is white, and Sally's being well justified in believing that snow is white is each a *necessary* condition for Sally's knowing that snow is white. Compare that sentence with this sentence:

If snow is white, and Sally believes that snow is white, and Sally is well justified in believing that snow is white, then Sally knows that snow is white.

In this sentence, the three conditions are presented as *jointly sufficient* for Sally to know that snow is white.

3) Is justified true belief sufficient for knowledge?

Is our analysis of the concept of knowledge too modest? Our analysis of what it is to know something concerns necessary conditions only. Should we take the bold step of saying that those conditions are not only each necessary but jointly sufficient for knowledge? Should we think we have in our three conditions both necessary and sufficient conditions for knowing something?

Here is what our analysis would be were we to suppose that the three conditions are both individually necessary and jointly sufficient conditions for knowledge.

Sally knows that water extinguishes fire if and only if:

1) water extinguishes fire
2) Sally believes that water extinguishes fire
3) Sally is well justified in believing that water extinguishes fire

If this analysis is correct, then, when any one of the these conditions is not present, Sally does not know that water extinguishes fire, but when all of these conditions are present, Sally does know that water extinguishes fire.

That each of the conditions is necessary for knowledge seems right, as we will find in the next section. Whether the three conditions are together sufficient for knowledge, though, is not at all clear. We seem to be able to construct counter examples to the claim that the three conditions are jointly sufficient for knowledge. We seem, that is, to be able to describe cases in which Sally has a justified true belief that p and yet about which we are strongly disinclined to say that Sally knows that p.

For instance, suppose that Sally's boss drives a red car and parks in a specific allotted parking space whenever he is in the building. Now suppose that Sally sees a red car parked in the boss's space and infers that her boss is in the building. Sally believes that her boss is in the building and she seems to be well justified in believing that he is, given that she has a good reason for believing he is. And, as it happens, her boss is in the building, so Sally's belief that her boss is in the building is true. But the car Sally saw is not her boss's car. The boss's car is in the shop. The boss gave his friend, who also drives a red car, permission to use his, the boss's, space, in thanks to the friend for giving him, the boss, a ride to work. Sally has a justified true belief that her boss is in the building, but we refuse (or, at least, we hesitate) to say that Sally knows that her boss is in the building.

The three conditions are satisfied in the example given above. And yet we don't think that Sally knows that her boss is in the building. If we are right that Sally does not know that her boss is in the building, then the three conditions are not jointly sufficient for knowledge.

Do you agree that Sally does not know that her boss is in the building? Reread the example. Can you explain how it is that Sally does not know that her boss is in the building? What feature of the example makes us resist attributing knowledge to Sally?

Philosophers have proposed adding various fourth conditions to our analysis of the concept of knowledge in the hope of stating conditions that truly are jointly sufficient for

knowledge. But some philosophers think that the analysis is fine as it stands. They say that we were wrong to think Sally well justified in her belief. (Either Sally was not well justified in believing the presence of a red car is good evidence that the boss is in the building or Sally was not well justified in believing that her boss's car was in its spot. Since she was not well justified in believing either of these propositions, she was not well justified in believing anything that followed from either of them.) That she is not well justified in believing that the boss is in the building is what explains why Sally does not know that her boss is in the building. Finally, other philosophers argue that the quest to find sufficient conditions for knowing something is misguided. They think it impossible to construct an informative list of conditions the presence of which always suffices for knowledge.

We will leave the question whether the concept of knowledge admits of analysis into a set of sufficient conditions. We will simply take the three conditions we have listed as each a necessary condition for knowledge, and we will remain agnostic on the question whether they, with or without a fourth or fifth condition, are jointly sufficient.

Let us now turn to the matter why each of the three conditions is a necessary condition for knowledge.

4) The belief condition

To know that penguins can fly, Sally must believe that penguins can fly, or at least so says the second of the three necessary conditions for knowledge, the belief condition. What is it to believe something? Why is belief necessary for knowledge?

Belief, we will say, is an attitude toward a proposition. Indicative sentences express propositions. "Penguins can fly." "Only a fool saws off the branch on which he sits." "Water flows uphill." "Buzz Aldrin was the second person to set foot on the moon." "Second comes right after first." These are sentences in the indicative mood and each expresses a proposition. (Well, perhaps the final example, "second comes right after first," is true solely in virtue of the meanings of the words and, thus, does not express a proposition.) Each, whether true or false, could express the content of a belief. Belief is the specific attitude of *holding true* a proposition. To believe something, then, we are saying, is to hold true some specific proposition. If Sally believes that penguins can fly, then Sally holds true the proposition that penguins can fly.

Is it possible to believe something but yet not to be able to put what one believes into words? It is possible, of course, for one to believe something but not right now be able to find quite the words one needs to express it accurately or completely. Still, in that case there is something, some proposition, that one believes, and one is just looking for the words to express it, words that presently escape one. But is it possible that there are no words that express what one believes? If it is possible to believe something that cannot be expressed in words, then to believe something is not, or at least not always, to have an attitude toward a proposition.

We, though, will assume that for any belief, there is a propositional expression of that belief. Not to make this assumption, it seems, would be to suppose that one could believe something while not being able to say, even to one's self, what it is that one believes.

Belief is not the *only* attitude one can take toward a proposition. Consider the proposition that penguins eat fish. Here are some attitudes Sally could take toward this

proposition:

Sally suspects that penguins eat fish.
Sally feels that penguins eat fish.
Sally hopes that penguins eat fish.
Sally fears that penguins eat fish.
Sally wonders whether penguins eat fish.
Sally guesses that penguins eat fish.
Sally doubts that penguins eat fish.
Sally hypothesizes that penguins eat fish.
Sally loves that penguins eat fish.

None of these attitudes is the attitude involved in knowing that penguins eat fish. Some of the attitudes listed are, like the attitude belief, cognitive attitudes (suspects, wonders whether, guesses, doubts, hypothesizes), while others are more about wants or desires or emotions. But no cognitive attitude other than belief seems strong enough to figure in knowing something.

Further, belief comes in degrees of strength, and not just any degree of strength is degree enough for knowledge. If Sally believes that penguins eat fish, but her belief is quite weak, open to revision given any little piece of contrary evidence, then Sally does not know that penguins eat fish, even if they do and she is justified in believing that they do. If Sally merely thinks that penguins eat fish, but she isn't really sure that they do, then certainly she does not know that penguins eat fish, even if necessary conditions 1) and 3) are both satisfied.

If Sally *knows* that penguins eat fish, then:

Sally believes *strongly* that penguins eat fish.
Sally believes *with conviction* that penguins eat fish.
Sally *is sure* that penguins eat fish.
Sally *is certain* that penguins eat fish.

Is this right? Must a belief be a strong belief for it to count as knowledge? Perhaps certainty is not required. Perhaps, that is, one can know something without being certain that it is true. We will discuss this issue in detail in Part III of this book, the part on scepticism about knowledge. Right now we don't have to have a strong opinion one way or the other. We need only say that a person filled with doubts about something he believes doesn't know that that something is true, even though he does believe it and even if the other two conditions are filled. A person surprised to have got something right didn't know that he was right.

Let us sum up. We made three points in this section. One, we said that whenever we believe something, there is something that we believe, and that that something is a proposition. Two, we said that believing something is having a specific attitude toward a proposition, namely, the attitude of holding true that proposition. This means that "Sally believes that penguins eat fish" is equivalent to "Sally believes that the proposition 'penguins eat fish' is true." Three, we said that when we know something, we believe strongly that that something is true; we don't just believe it weakly.

Some philosophers deny that knowledge involves belief. They say that to believe something is one thing, to know something is another. What one knows, one does not believe–the two attitudes exclude each other. These philosophers are not saying that knowing something is more than *merely* believing it; they say that to know something is to leave belief behind. The idea is that any belief, whether true or false, is simply an opinion, no matter how well grounded in one's experience. To know something, on the other hand, is not to have an opinion about it at all, but to see it or grasp it as it in fact is in itself. Philosophers who deny that knowing something involves believing it seem to have to restrict knowledge to just a few domains, to mathematics and, perhaps, to philosophy, but not to many other areas of inquiry. It is for this reason, namely, that the view that knowledge does not involve belief at all forces us to limit the areas in which knowledge might be possible, that we will continue to take belief to be necessary to knowledge. We want to investigate the possibility that we can know that penguins eat fish, for instance, or that humans typically have two hands. If knowledge does not involve belief, then the possibility that we can know about ordinary matters of fact in the physical world around us is closed before we consider it.

5) Truth

Question: In virtue of what is a true proposition true? Answer: A true proposition is true in virtue of describing correctly things in the world. False propositions, then, are false in virtue of failing to describe things correctly.

I think that this answer is substantially correct, at least about those propositions that purport to describe things. Perhaps some propositions are true though they are not at all descriptive. Let us confine our discussion to descriptive propositions, even if not all propositions are descriptive and even if borders between descriptive and not descriptive are vague, at least until we understand the question and appreciate the force of the answer to it that we have given.

The proposition "some people in this room have dark hair" is true in virtue of the dark hair of some people in this room or (to put it another way) in virtue of the dark-hairedness of some people in this room. The proposition "some people in this room are currently swimming in the ocean" is false in virtue of no one in this room's currently swimming in the ocean. The proposition "Lester Pearson has recently returned from Ulan Bator" is false in virtue of Lester Pearson's not having recently returned from Ulan Bator.

On the one side we have a sentence expressing a proposition, on the other side we have a description of how things stand, one we think accurate, and one, moreover, generated from the proposition itself. The true propositions are true in virtue of matching the accurate description of how things stand, the false propositions are false in virtue of not matching the accurate description of how things stand.

Seems a difficult way to make a simple point! We might as well have said, one would think, that true propositions are true in virtue of being true, false ones false in virtue of being false. Indeed, we very well might have said just that. The point of using words like "accurate description" and "matching" is simply to remove the word "true" from our account of what it is in virtue of which true propositions are true. Nonetheless, we don't really understand the words we used in giving our answer except via the notion of being true. Our account of what it is in virtue of which true propositions are true is not, then, a way of making

clear the concept of truth to one who lacks it.

Why are we asking this question, then, if the answer is obvious and doesn't tell us anything more than we knew in asking the question? We are asking the question of the nature of truth mainly so that we can discuss and eliminate various mistaken answers to it. Here are a small number of mistaken answers to the question in virtue of what are true propositions true:

A true proposition is true in virtue of:
1) there being proof that it is true
2) a person's sincere belief that it is true
3) everyone's agreeing that it is true
4) some authority's pronouncing that it is true
5) its being a legitimate move in some social practice

One or another of these answers might appear to be just as obvious or just as good as the answer given above. Some people think that one or another of these mistaken answers is exactly the same as the answer given above, though expressed differently. Some people think one or another mistaken answer superior to our answer. We need to see, then, how these answers are mistaken.

Our own answer, again, is that a true proposition is true in virtue of correctly describing how things are in the world. If the proposition "now is the winter of our discontent made glorious summer by that son of York" is true, it is true in virtue of the winter of our discontent's now being made glorious summer by that son of York; if it is false, it is false in virtue of our not being discontented, or in virtue of our discontent's not being made glorious summer, or in virtue of its not being made glorious by that son of York.

The first mistaken answer to the question in virtue of what a true proposition is true is that a true proposition is true in virtue of there being proof that it is true. "Now is the winter of our discontent made glorious summer" is true, then, on this account, in virtue of there being proof that now is the winter of our discontent made glorious summer. But how things are in the world doesn't depend on what we can and cannot prove. A proposition could be true though no one can prove it true. (A proposition no one can *prove true* might be a proposition no one can *know* is true; but that doesn't mean that the proposition is false.) Indeed, a proposition would have already to be true before one could prove it true. In proving a proposition true, one reveals that it already had the characteristic of being true. Thus, being true is not the same as being proved true.

The second mistaken answer to the question in virtue of what a true proposition is true is that a true proposition is true in virtue of a person's sincere belief that it is true. This answer implies that everything a person sincerely believes is true. Moreover, it implies that you and I could sincerely hold opposed beliefs and yet both of us believe truly. We have all had the experience of thinking something true and then discovering it is false; that we have had this experience tells against the idea that every sincerely held belief is true. And when we disagree with another, we often think that one of us is mistaken; we shouldn't think this if all sincerely held beliefs are true.

"But still, what is true for me might not be true for you, and what is true for you might not be true for me." There are two different ideas expressed in this sentence, neither of

which, on examination, has much to do with the concept of truth. Each of the two ideas it expresses is true, but the fact that it expresses them using the word "truth" misleads people into the mistaken idea that a true proposition is true in virtue of someone's sincerely believing it. One idea expressed by this sentence is that you and I might have different, even opposing, beliefs about something, and it might be hard for us to figure out which one of us, if either, is right. It might be so hard or unpleasant to pursue that matter that it's best for us simply to drop it. But that idea doesn't imply that both of us are right. It doesn't imply that sincerely believing something means that that something is true. The idea here would better be expressed by saying that I believe one thing, you believe something incompatible with what I believe, and I don't want to bother anymore talking with you about who's right.

The other true idea that "true for me, not true for you" expresses is that sometimes I see things that you don't or that I categorize things in ways that you don't. Perhaps I like to use animal names in accord with what I take to be how biologists understand the phylogenetic relations among animals. So when I say "ape," I include humans. When I say "insect," I don't include mites or spiders. You, though, are uninterested in biological systematics, and you use animal names in accord with how you care to treat different animals. So when you say "ape," you do not include humans (and maybe you include some monkeys), and when you say "insect," you include mites and spiders. It's true for me that humans are apes, but it is not true for you. In this case we are both right, but not in virtue of our sincerely believing what we do. We can both be right because we are talking about different things. Your word "ape" is not my word "ape." We no more disagree about whether humans are apes than we disagree about whether cash machines can be found at banks. They can, if by "bank" is meant a financial institution, they can't if by "bank" is meant the side of a river. Here, though, it would be better that instead of speaking of different things being true for each of us, we spoke of us as meaning different things by our words. That we mean different things indicates that we have different interests.

The third mistaken answer to the question in virtue of what a true proposition is true is that a true proposition is true in virtue of everyone's agreeing that it is true–or, perhaps, just in virtue of most people's believing it true. If everyone, or almost everyone, believes it true, then it is true. Well, lots of people believing something true might well be excellent evidence that it is true, though, of course, it is always possible that the majority view is false. But, again, believing something true doesn't make it true. Moreover, to think that the widespread acceptance of a proposition is evidence that that proposition is true is already to have in mind the correct view of what it is in virtue of which true propositions are true. The evidence is evidence that the world is the way the proposition describes it to be.

The fourth mistaken answer to the question in virtue of what is a true proposition true is that a true proposition is true in virtue of some authority's pronouncing it true. Authorities here could include scientists, priests, teachers, cultural or political leaders, doctors, or parents. According to this mistaken answer, by an authority's pronouncing a proposition, that proposition is true. If this view is correct, then much of what we ordinarily believe about truth must be false. We don't believe that a change in view by an authority is always a change from a true view to a true view. To the extent that we have some sympathy with our correct answer to the question of the nature of truth, we will wonder how someone's mere say-so could constitute truth. After all, we think, a true proposition is one that gets some fact

right, and decreeing that something is a fact doesn't produce that fact. We think that our authorities investigate things and, with luck, make discoveries, not that they create the facts they report by investigating things.

There is, though, a narrow range of cases in which an authority's pronouncement does make a proposition true. Officials at weddings or hockey games, for instance, speak truly just by speaking under colour of their office at the right moments. "I now pronounce you husband and wife," for instance, is made true simply by being spoken by the right person at the right time. And when a linesman calls the play offside, the play is offside. Without the call, the fact is that the play was onside. (This is true even if an attacking player crossed the blue line in advance of the puck. As an baseball umpire once said: "It ain't anything 'til I call it.") A person who creates a new game says that these are the rules and, thereby, they are the rules.

Cases in which saying something is so makes it so, in which decreeing something the case makes it the case, are typically, if not inevitably, found within human social practices. Even if they really are cases in which propositions are true in virtue of being pronounced true, they don't show that all true propositions are true in virtue of being pronounced true. Outside the range of these cases, what someone says is true or false in virtue of how the world is, not in virtue of their saying it, no matter how great an authority they are or how momentous is their pronouncement.

The fifth mistaken answer to the question in virtue of what is a true proposition true is that a true proposition is true in virtue of being a legitimate move in a social practice. A conversation is a social practice of one sort or another when the people having it follow certain rules throughout it. They might follow rules explicitly laid out for them, but most often the rules are implicit and the people talking follow them without knowing explicitly what they are. Conversations about how things are include among the rules certain standards–standards of evidence, for instance–that, when met, render what is said true. The idea here is that one speaks truly when one lives up to the standards of acceptibility found in the practice in which one is participating. There is nothing beyond the standards of a specific practice by which the standards of that practice can be evaluated, so it is in virtue of meeting them that a proposition spoken in the course of a social practice is true.

That we see a proposition to be reasonable given certain standards is a good reason for thinking it true, at least when we have reason to think that meeting those standards is correlated with being true; yet, that it is reasonable to believe a certain proposition does not mean that the proposition is true. The standards that are in place are in place because, if we are lucky, propositions that meet them are, often enough, true ("true" in our correct understanding). But their being true has to do not with their meeting standards, but rather with their describing accurately how things are.

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The general problem with these mistaken answers is that they confuse our grounds or reasons for believing of some proposition that it is true with what makes that proposition true, if it is true. I think that this confusion is simply the result of our great interest in reasons or grounds for belief, and our relatively weak interest in the concept of truth. We already understand the concept of truth. What we want to know is what is the truth. We want to know which propositions are the true ones. We want to know how to tell whether a proposition is true. That is, our real interest lies with the concept of justification, not the concept of truth. When

we are asked to think about the concept of truth, then, our mind wanders over to problems of grounds or reasons or justification–to problems, that is, of what is true.

Let us summarize our account of the concept of truth. All propositions have a truth value. There are at least two truth values, true and false. (We will suppose that there are only two truth values, true and false, though there are interesting grounds for suspecting that there is a third truth value.) Propositions, at least many of them, are descriptions. They purport to describe how things are in the world. A true proposition, at least a true descriptive proposition, is true in virtue of getting what it describes correct. A false proposition is false in virtue of misdescribing what it attempts to describe.

We can capture these ideas in a formula: The proposition "p," whatever it is, is true if and only if p. For example, the proposition "perseverance keeps honour bright" is true if and only if perseverance keeps honour bright. The proposition "steel is composed of iron and carbon" is true if and only if steel is composed of iron and carbon. The proposition "humans tend to combust spontaneously when they are gravely worried" is true if and only if humans tend to combust spontaneously when they are gravely worried. The proposition purports to describe something and it is true if the aspect of the world it purports to describe is as it describes it. A proposition is false if and only if it misdescribes what it purports to describe. One who sees that the formula produces a true statement of necessary and sufficient conditions for any proposition "p" understands the concept of truth. She understands what it is for a proposition to be true and what it is for one to be false.

Notice that in our formula there is no mention of belief, or justification, or agreement, or authorities, or pronouncement, or social practices. Our formula reminds us that the concept of truth is one thing, while both what is true and how to tell whether something is true are other things.

6) Questions and answers about the concept of truth

Can a proposition be true though no one believes it is?

–Yes. Whether a proposition is true or false has to do with how the world is. Whether a proposition is true or false does not depend on the state of people's beliefs.

Can one person's belief that penguins eat fish be true while another person's belief that penguins don't eat fish also be true?

–No. For any true belief, all beliefs inconsistent with that belief are false.

Suppose that some proposition is hotly contested by people who have investigated the matter. Does the existence of controversy among authorities mean that that proposition is neither true nor false?

–No. One side to the controversy might believe truly, which would mean that the other side believes falsely.

Can a proposition be both true and false?

–No. A proposition that has a truth value has only one truth value. If its truth value is either true or false, its negation's truth value is different.

Can a proposition be neither true nor false?

–Maybe. Oftentimes our descriptions are vague, and vagueness might render a description neither true nor false. An example might be "It's raining," said when there is very little precipitation. Some philosophers have argued that sentences about the future are neither true nor false. Some philosophers have argued that ethical judgements are neither true nor false.

7) The truth condition in the concept of knowledge

If Sally knows that colourless green ideas sleep furiously, then it is true that colourless green ideas sleep furiously. The first necessary condition for knowledge, we said, is that the known proposition be true. One cannot know that colourless green ideas sleep furiously should it be false that colourless green ideas sleep furiously. One does not know that p when "p" is false, no matter how sincerely one believes that p and no matter how much evidence one has that p.

To know that p is to know that the proposition "p" is true.