

On Certainty



LUDWIG WITTGENSTEIN

Ludwig Wittgenstein (1889–1951) is a seminal and polarizing figure in 20th-century philosophy. His early *Tractatus Logico-Philosophicus* and late *Philosophical Investigations* represent pioneering but bifurcating philosophical paths. The author of works too numerous to cite here, on topics including color, mathematics, and psychology, Wittgenstein worked on *On Certainty* during the last 18 months of his life and up to his last days.

1. If you do know that *here is one hand*, we'll grant you all the rest.

When one says that such and such a proposition can't be proved, of course that does not mean that it can't be derived from other propositions; any proposition can be derived from other ones. But they may be no more certain than it is itself. (On this a curious remark by H. Newman.)

2. From its *seeming* to me—or to everyone—to be so, it doesn't follow that it *is* so.

What we can ask is whether it can make sense to doubt it.

3. If e.g. someone says "I don't know if there's a hand here" he might be told "Look closer".—This possibility of satisfying oneself is part of the language-game. Is one of its essential features.

4. "I know that I am a human being." In order to see how unclear the sense of this proposition is, consider its negation. At most it might be taken to mean "I know I have the organs of a human". (E.g. a brain which, after all, no one has ever yet seen.) But what about such a proposition as "I know I have a brain"? Can I doubt it? Grounds for *doubt* are lacking! Everything speaks in its favour, nothing against it. Nevertheless it is imaginable that my skull should turn out empty when it was operated on.

5. Whether a proposition can turn out false after all depends on what I make count as determinants for that proposition.

6. Now, can one enumerate what one knows (like Moore)? Straight off like that, I believe not.—For otherwise the expression "I know" gets misused. And through this misuse a queer and extremely important mental state seems to be revealed.

7. My life shews that I know or am certain that there is a chair over there, or a door, and so on.—I tell a friend e.g. "Take that chair over there", "Shut the door", etc. etc.

8. The difference between the concept of 'knowing' and the concept of 'being certain' isn't of any great importance at all, except where "I know" is meant to mean: I *can't* be wrong. In a law-court, for example, "I am certain" could replace "I know" in every piece of testimony. We might even imagine its being forbidden to say "I know" there. [A passage in *Wilhelm Meister*; where "You know" or "You knew" is used in the sense "You were certain," the facts being different from what he knew.]

9. Now do I, in the course of my life, make sure I know that here is a hand—my own hand, that is?

10. I know that a sick man is lying here? Non-sense! I am sitting at his bedside, I am looking atten-

Reprinted from Ludwig Wittgenstein, *On Certainty* (Oxford: Basil Blackwell, 1969), by permission of Basil Blackwell.

tively into his face.—So I don't know, then, that there is a sick man lying here? Neither the question nor the assertion makes sense. Any more than the assertion "I am here", which I might yet use at any moment, if suitable occasion presented itself.—Then is " $2 \times 2 = 4$ " nonsense in the same way, and not a proposition of arithmetic, apart from particular occasions? " $2 \times 2 = 4$ " is a true proposition of arithmetic—not "on particular occasions" nor "always"—but the spoken or written sentence " $2 \times 2 = 4$ " in Chinese might have a different meaning or be out and out nonsense, and from this is seen that it is only in use that the proposition has its sense. And "I know that there's a sick man lying here", used in an *unsuitable* situation, seems not to be nonsense but rather seems matter-of-course, only because one can fairly easily imagine a situation to fit it, and one thinks that the words "I know that . . ." are always in place where there is no doubt, and hence even where the expression of doubt would be unintelligible.

11. We just do not see how very specialized the use of "I know" is.

12.—For "I know" seems to describe a state of affairs which guarantees what is known, guarantees it as a fact. One always forgets the expression "I thought I knew".

13. For it is not as though the proposition "It is so" could be inferred from someone else's utterance: "I know it is so". Nor from the utterance together with its not being a lie.—But can't I infer "It is so" from my own utterance "I know etc."? Yes; and also "There is a hand there" follows from the proposition "He knows that there's a hand there". But from his utterance "I know . . ." it does not follow that he does know it.

14. That he does know takes some shewing.

15. It needs to be *shewn* that no mistake was possible. Giving the assurance "I know" doesn't suffice. For it is after all only an assurance that I can't be making a mistake, and it needs to be *objectively* established that I am not making a mistake about *that*.

16. "If I know something, then I also know that I know it, etc." amounts to: "I know that" means "I am incapable of being wrong about that". But whether I am so needs to be established objectively.

17. Suppose now I say "I'm incapable of being wrong about this: that is a book" while I point to an object. What would a mistake here be like? And have I any *clear* idea of it?

18. "I know" often means: I have the proper grounds for my statement. So if the other person is acquainted with the language-game, he would admit that I know. The other, if he is acquainted with the language-game, must be able to imagine *how* one may know something of the kind.

19. The statement "I know that here is a hand" may then be continued: "for it's *my* hand that I'm looking at". Then a reasonable man will not doubt that I know.—Nor will the idealist; rather he will say that he was not dealing with the practical doubt which is being dismissed, but there is a further doubt *behind* that one.—That this is an *illusion* has to be shewn in a different way.

20. "Doubting the existence of the external world" does not mean for example doubting the existence of a planet, which later observations proved to exist.—Or does Moore want to say that knowing that here is his hand is different in kind from knowing the existence of the planet Saturn? Otherwise it would be possible to point out the discovery of the planet Saturn to the doubters and say that its existence has been proved, and hence the existence of the external world as well.

21. Moore's view really comes down to this: the concept 'know' is analogous to the concepts 'believe', 'surmise', 'doubt', 'be convinced' in that the statement "I know . . ." can't be a mistake. And if that is so, then there can be an inference from such an utterance to the truth of an assertion. And here the form "I thought I knew" is being overlooked.—But if this latter is inadmissible, then a mistake in the *assertion* must be logically impossible too. And anyone who is acquainted with the language-game must realize this—an assurance from a reliable man that he *knows* cannot contribute anything.

22. It would surely be remarkable if we had to believe the reliable person who says "I can't be wrong"; or who says "I am not wrong".

23. If I don't know whether someone has two hands (say, whether they have been amputated or not) I shall believe his assurance that he has two hands, if

he is trustworthy. And if he says he *knows* it, that can only signify to me that he has been able to make sure, and hence that his arms are e.g. not still concealed by coverings and bandages, etc. etc. My believing the trustworthy man stems from my admitting that it is possible for him to make sure. But someone who says that perhaps there are no physical objects makes no such admission.

24. The idealist's question would be something like: "What right have I not to doubt the existence of my hands?" (And to that the answer can't be: I *know* that they exist.) But someone who asks such a question is overlooking the fact that a doubt about existence only works in a language-game. Hence, that we should first have to ask: what would such a doubt be like?, and don't understand this straight off.

25. One may be wrong even about "there being a hand here". Only in particular circumstances is it impossible.—"Even in a calculation one can be wrong—only in certain circumstances one can't."

26. But can it be seen from a *rule* what circumstances logically exclude a mistake in the employment of rules of calculation?

What use is a rule to us here? Mightn't we (in turn) go wrong in applying it?

27. If, however, one wanted to give something like a rule here, then it would contain the expression "in normal circumstances". And we recognize normal circumstances but cannot precisely describe them. At most, we can describe a range of abnormal ones.

28. What is 'learning a rule'?—*This*.

What is 'making a mistake in applying it'?—*This*. And what is pointed to here is something indeterminate.

29. Practice in the use of the rule also shews what is a mistake in its employment.

30. When someone has made sure of something, he says: "Yes, the calculation is right", but he did not infer that from his condition of certainty. One does not infer how things are from one's own certainty.

Certainty is *as it were* a tone of voice in which one declares how things are, but one does not infer from the tone of voice that one is justified.

31. The propositions which one comes back to again and again as if bewitched—these I should like to expunge from philosophical language.

32. It's not a matter of *Moore's* knowing that

there's a hand there, but rather we should not understand him if he were to say "Of course I may be wrong about this". We should ask "What is it like to make such a mistake as that?"—e.g. what's it like to discover that it was a mistake?

33. Thus we expunge the sentences that don't get us any further.

34. If someone is taught to calculate, is he also taught that he can rely on a calculation of his teacher's? But these explanations must after all sometime come to an end. Will he also be taught that he can trust his senses—since he is indeed told in many cases that in such and such a special case you *cannot* trust them?—

Rule and exception.

35. But can't it be imagined that there should be no physical objects? I don't know. And yet "There are physical objects" is nonsense. Is it supposed to be an empirical proposition?—

And is *this* an empirical proposition: "There seem to be physical objects"?

36. "A is a physical object" is a piece of instruction which we give only to someone who doesn't yet understand either what "A" means, or what "physical object" means. Thus it is instruction about the use of words, and "physical object" is a logical concept. (Like colour, quantity, . . .) And that is why no such proposition as: "There are physical objects" can be formulated.

Yet we encounter such unsuccessful shots at every turn.

37. But is it an adequate answer to the scepticism of the idealist, or the assurances of the realist, to say that "There are physical objects" is nonsense? For them after all it is not nonsense. It would, however, be an answer to say: this assertion, or its opposite is a misfiring attempt to express what can't be expressed like that. And that it does misfire can be shewn; but that isn't the end of the matter. We need to realize that what presents itself to us as the first expression of a difficulty, or of its solution, may as yet not be correctly expressed at all. Just as one who has a just censure of a picture to make will often at first offer the censure where it does not belong, and an *investigation* is needed in order to find the right point of attack for the critic.

38. Knowledge in mathematics: Here one has to

keep on reminding oneself of the unimportance of the 'inner process' or 'state' and ask "Why should it be important? What does it matter to me?" What is interesting is how we *use* mathematical propositions.

39. *This* is how calculation is done, in such circumstances a calculation is *treated* as absolutely reliable, as certainly correct.

40. Upon "I know that here is my hand" there may follow the question "How do you know?" and the answer to that presupposes that *this* can be known in *that* way. So, instead of "I know that here is my hand", one might say "Here is my hand", and then add *how* one knows.

41. "I know where I am feeling pain", "I know that I feel it *here*" is as wrong as "I know that I am in pain". But "I know where you touched my arm" is right.

42. One can say "He believes it, but it isn't so", but not "He knows it, but it isn't so". Does this stem from the difference between the mental states of belief and of knowledge? No.—One may for example call "mental state" what is expressed by tone of voice in speaking, by gestures etc. It would thus be *possible* to speak of a mental state of conviction, and that may be the same whether it is knowledge or false belief. To think that different states must correspond to the words "believe" and "know" would be as if one believed that different people had to correspond to the word "I" and the name "Ludwig", because the concepts are different.

43. What sort of proposition is this: "We *cannot* have miscalculated in $12 \times 12 = 144$ "? It must surely be a proposition of logic.—But now, is it not the same, or doesn't it come to the same, as the statement $12 \times 12 = 144$?

44. If you demand a rule from which it follows that there can't have been a miscalculation here, the answer is that we did not learn this through a rule, but by learning to calculate.

45. We got to know the *nature* of calculating by learning to calculate.

46. But then can't it be described how we satisfy ourselves of the reliability of a calculation? O yes! Yet no rule emerges when we do so.—But the most important thing is: The rule is not needed. Nothing is lacking. We do calculate according to a rule, and that is enough.

47. *This* is how one calculates. Calculating is *this*. What we learn at school, for example. Forget this transcendent certainty, which is connected with your concept of spirit.

48. However, out of a host of calculations certain ones might be designated as reliable once for all, others as not yet fixed. And now, is this a *logical* distinction?

49. But remember: even when the calculation is something fixed for me, this is only a decision for a practical purpose.

50. When does one say, I know that $\dots \times \dots = \dots$? When one has checked the calculation.

51. What sort of proposition is: "What could a mistake here be like!"? It would have to be a logical proposition. But it is a logic that is not used, because what it tells us is not learned through propositions.—It is a logical proposition; for it does describe the conceptual (linguistic) situation.

52. This situation is thus not the same for a proposition like "At this distance from the sun there is a planet" and "Here is a hand" (namely my own hand). The second can't be called a hypothesis. But there isn't a sharp boundary line between them.

53. So one might grant that Moore was right, if he is interpreted like this: a proposition saying that here is a physical object may have the same logical status as one saying that here is a red patch.

54. For it is not true that a mistake merely gets more and more improbable as we pass from the planet to my own hand. No: at some point it has ceased to be conceivable.

This is already suggested by the following: if it were not so, it would also be conceivable that we should be wrong in *every* statement about physical objects; that any we ever make are mistaken.

55. So is the *hypothesis* possible, that all the things around us don't exist? Would that not be like the hypothesis of our having miscalculated in all our calculations?

56. When one says: "Perhaps this planet doesn't exist and the light-phenomenon arises in some other way", then after all one needs an example of an object which does exist. This doesn't exist,—as *for example* does. . . .

Or are we to say that *certainly* is merely a constructed point to which some things approximate

more, some less closely? No. Doubt gradually loses its sense. This language-game just *is* like that.

And everything descriptive of a language-game is part of logic.

57. Now might not "I know, I am not just surmising, that here is my hand" be conceived as a proposition of grammar? Hence *not* temporally.—

But in that case isn't it like *this* one: "I know, I am not just surmising, that I am seeing red"?

And isn't the consequence "So there are physical objects" like: "So there are colours"?

58. If "I know etc." is conceived as a grammatical proposition, of course the "I" cannot be important. And it properly means "There is no such thing as a doubt in this case" or "The expression 'I do not know' makes no sense in this case". And of course it follows from this that "I know" makes no sense either.

59. "I know" is here a *logical* insight. Only realism can't be proved by means of it.

60. It is wrong to say that the 'hypothesis' that *this* is a bit of paper would be confirmed or disconfirmed by later experience, and that, in "I know that this is a bit of paper," the "I know" either relates to such an hypothesis or to a logical determination.

61. . . . A meaning of a word is a kind of employment of it.

For it is what we learn when the word is incorporated into our language.

62. That is why there exists a correspondence between the concepts 'rule' and 'meaning'.

63. If we imagine the facts otherwise than as they are, certain language-games lose some of their importance, while others become important. And in this way there is an alteration—a gradual one—in the use of the vocabulary of a language.

64. Compare the meaning of a word with the 'function' of an official. And 'different meanings' with 'different functions'.

65. When language-games change, then there is a change in concepts, and with the concepts the meanings of words change.

66. I make assertions about reality, assertions which have different degrees of assurance. How does the degree of assurance come out? What consequences has it?

We may be dealing, for example, with the certainty of memory, or again of perception. I may be sure of something, but still know what test might convince me of error. I am e.g. quite sure of the date of a battle, but if I should find a different date in a recognized work of history, I should alter my opinion, and this would not mean I lost all faith in judging.

67. Could we imagine a man who keeps on making mistakes where we regard a mistake as ruled out, and in fact never encounter one?

E.g. he says he lives in such and such a place, is so and so old, comes from such and such a city, and he speaks with the same certainty (giving all the tokens of it) as I do, but he is wrong.

But what is his relation to this error? What am I to suppose?

68. The question is: what is the logician to say here?

69. I should like to say: "If I am wrong about *this*, I have no guarantee that anything I say is true." But others won't say that about me, nor will I say it about other people.

70. For months I have lived at address A, I have read the name of the street and the number of the house countless times, have received countless letters here and given countless people the address. If I am wrong about it, the mistake is hardly less than if I were (wrongly) to believe I was writing Chinese and not German.

71. If my friend were to imagine one day that he had been living for a long time past in such and such a place, etc. etc., I should not call this a *mistake*, but rather a mental disturbance, perhaps a transient one.

72. Not every false belief of this sort is a mistake.

73. But what is the difference between mistake and mental disturbance? Or what is the difference between my treating it as a mistake and my treating it as mental disturbance?

74. Can we say: a *mistake* doesn't only have a cause, it also has a ground? I.e., roughly: when someone makes a mistake, this can be fitted into what he knows aright.

75. Would this be correct: If I merely believed wrongly that there is a table here in front of me, this might still be a mistake; but if I believe wrongly that I have seen this table, or one like it, every day for sev-

eral months past, and have regularly used it, that isn't a mistake?

76. Naturally, my aim must be to say what the statements one would like to make here, but cannot make significantly.

77. Perhaps I shall do a multiplication twice to make sure, or perhaps get someone else to work it over. But shall I work it over again twenty times, or get twenty people to go over it? And is that some sort of negligence? Would the certainty really be greater for being checked twenty times?

78. And can I give a *reason* why it isn't?

79. That I am a man and not a woman can be verified, but if I were to say I was a woman, and then tried to explain the error by saying I hadn't checked the statement, the explanation would not be accepted.

80. The *truth* of my statements is the test of my *understanding* of these statements.

81. That is to say: if I make certain false statements, it becomes uncertain whether I understand them.

82. What counts as an adequate test of a statement belongs to logic. It belongs to the description of the language-game.

83. The *truth* of certain empirical propositions belongs to our frame of reference.

84. Moore says he *knows* that the earth existed long before his birth. And put like that it seems to be a personal statement about him, even if it is in addition a statement about the physical world. Now it is philosophically uninteresting whether Moore knows this or that, but it is interesting that, and how, it can be known. If Moore had informed us that he knew the distance separating certain stars, we might conclude from that that he had made some special investigations, and we shall want to know what these were. But Moore chooses precisely a case in which we all seem to know the same as he, and without being able to say how. I believe e.g. that I know as much about this matter (the existence of the earth) as Moore does, and if he knows that it is as he says, then *I* know it too. For it isn't, either, as if he had arrived at his proposition by pursuing some line of thought which, while it is open to me, I have not in fact pursued.

85. And what goes into someone's knowing this? Knowledge of history, say? He must know what it

means to say: the earth has already existed for such and such a length of time. For not *any* intelligent adult must know that. We see men building and demolishing houses, and are led to ask: "How long has this house been here?" But how does one come on the idea of asking this about a mountain, for example? And have all men the notion of the earth as a *body*, which may come into being and pass away? Why shouldn't I think of the earth as flat, but extending without end in every direction (including depth)? But in that case one might still say "I know that this mountain existed long before my birth."—But suppose I met a man who didn't believe that?

86. Suppose I replaced Moore's "I know" by "I am of the unshakeable conviction"?

87. Can't an assertoric sentence, which was capable of functioning as an hypothesis, also be used as a foundation for research and action? I.e., can't it simply be isolated from doubt, though not according to any explicit rule? It simply gets assumed as a truism, never called in question, perhaps not even everformulated.

88. It may be for example that *all enquiry on our part* is set so as to exempt certain propositions from doubt, if they are everformulated. They lie apart from the route travelled by enquiry.

89. One would like to say: "Everything speaks for, and nothing against the earth's having existed long before . . ."

Yet might I not believe the contrary after all? But the question is: What would the practical effects of this belief be?—Perhaps someone says: "That's not the point. A belief is what it is whether it has any practical effects or not." One thinks: It is the same adjustment of the human mind anyway.

90. "I know" has a primitive meaning similar to and related to "I see" ("wissen", "videre"). And "I knew he was in the room, but he wasn't in the room" is like "I saw him in the room, but he wasn't there". "I know" is supposed to express a relation, not between me and the sense of a proposition (like "I believe") but between me and a fact. So that the *fact* is taken into my consciousness. (Here is the reason why one wants to say that nothing that goes on in the outer world is really known, but only what happens in the domain of what are called sense-data.) This

would give us a picture of knowing as the perception of an outer event through visual rays which project it as it is into the eye and the consciousness. Only then the question at once arises whether one can be *certain* of this projection. And this picture does indeed show how our *imagination* presents knowledge, but not what lies at the bottom of this presentation.

91. If Moore says he knows the earth existed etc., most of us will grant him that it has existed all that time, and also believe him when he says he is convinced of it. But has he also got the right *ground* for his conviction? For if not, then after all he doesn't know (Russell).

92. However, we can ask: May someone have telling grounds for believing that the earth has only existed for a short time, say since his own birth?—Suppose he had always been told that,—would he have any good reason to doubt it? Men have believed that they could make rain; why should not a king be brought up in the belief that the world began with him? And if Moore and this king were to meet and discuss, could Moore really prove his belief to be the right one? I do not say that Moore could not convert the king to his view, but it would be a conversion of a special kind; the king would be brought to look at the world in a different way.

Remember that one is sometimes convinced of the *correctness* of a view by its *simplicity* or *symmetry*, i.e., these are what induce one to go over to this point of view. One then simply says something like: "That's how it must be."

93. The propositions presenting what Moore '*knows*' are all of such a kind that it is difficult to imagine *why* anyone should believe the contrary. E.g. the proposition that Moore has spent his whole life in close proximity to the earth.—Once more I can speak of myself here instead of speaking of Moore. What could induce me to believe the opposite? Either a memory, or having been told.—Everything that I have seen or heard gives me the conviction that no man has ever been far from the earth. Nothing in my picture of the world speaks in favour of the opposite.

94. But I did not get my picture of the world by satisfying myself of its correctness; nor do I have it because I am satisfied of its correctness. No: it is the inherited background against which I distinguish between true and false.

95. The propositions describing this world-picture might be part of a kind of mythology. And their role is like that of rules of a game; and the game can be learned purely practically, without learning any explicit rules.

96. It might be imagined that some propositions, of the form of empirical propositions, were hardened and functioned as channels for such empirical propositions as were not hardened but fluid; and that this relation altered with time, in that fluid propositions hardened, and hard ones became fluid.

97. The mythology may change back into a state of flux, the river-bed of thoughts may shift. But I distinguish between the movement of the waters on the river-bed and the shift of the bed itself; though there is not a sharp division of the one from the other.

98. But if someone were to say "So logic too is an empirical science" he would be wrong. Yet this is right: the same proposition may get treated at one time as something to test by experience, at another as a rule of testing.

99. And the bank of that river consists partly of hard rock, subject to no alteration or only to an imperceptible one, partly of sand, which now in one place now in another gets washed away, or deposited.

100. The truths which Moore says he knows, are such as, roughly speaking, all of us know, if he knows them.

101. Such a proposition might be e.g. "My body has never disappeared and reappeared again after an interval."

102. Might I not believe that once, without knowing it, perhaps in a state of unconsciousness, I was taken far away from the earth—that other people even know this, but do not mention it to me? But this would not fit into the rest of my convictions at all. Not that I could describe the system of these convictions. Yet my convictions do form a system, a structure.

103. And now if I were to say "It is my unshakable conviction that etc.", this means in the present case too that I have not consciously arrived at the conviction by following a particular line of thought, but that it is anchored in all my *questions and answers*, so anchored that I cannot touch it.

104. I am for example also convinced that the sun is not a hole in the vault of heaven.

105. All testing, all confirmation and disconfirmation of a hypothesis takes place already within a system. And this system is not a more or less arbitrary and doubtful point of departure for all our arguments: no, it belongs to the essence of what we call an argument. The system is not so much the point of departure, as the element in which arguments have their life.

106. Suppose some adult had told a child that he had been on the moon. The child tells me the story, and I say it was only a joke, the man hadn't been on the moon; no one has ever been on the moon; the moon is a long way off and it is impossible to climb up there or fly there.—If now the child insists, saying perhaps there is a way of getting there which I don't know, etc. what reply could I make to him? What reply could I make to the adults of a tribe who believe that people sometimes go to the moon (perhaps that is how they interpret their dreams), and who indeed grant that there are no ordinary means of climbing up to it or flying there?—But a child will not ordinarily stick to such a belief and will soon be convinced by what we tell him seriously.

107. Isn't this altogether like the way one can instruct a child to believe in a God, or that none exists, and it will accordingly be able to produce apparently telling grounds for the one or the other?

108. "But is there then no objective truth? Isn't it true, or false, that someone has been on the moon?" If we are thinking within our system, then it is certain that no one has ever been on the moon. Not merely is nothing of the sort ever seriously reported to us by reasonable people, but our whole system of physics forbids us to believe it. For this demands answers to the questions "How did he overcome the force of gravity?" "How could he live without an atmosphere?" and a thousand others which could not be answered. But suppose that instead of all these answers we met the reply: "We don't know *how* one gets to the moon, but those who get there know at once that they are there; and even you can't explain everything." We should feel ourselves intellectually very distant from someone who said this.

109. "An empirical proposition can be *tested*" (we say). But how? and through what?

110. What *counts* as its test?—"But is this an adequate test? And, if so, must it not be recognizable as such in logic?"—As if giving grounds did not come

to an end sometime. But the end is not an ungrounded presupposition: it is an ungrounded way of acting.

111. "I know that I have never been on the moon." That sounds quite different in the circumstances which actually hold, to the way it would sound if a good many men had been on the moon, and some perhaps without knowing it. In *this* case one could give grounds for this knowledge. Is there not a relationship here similar to that between the general rule of multiplying and particular multiplications that have been carried out?

I want to say: my not having been on the moon is as sure a thing for me as any grounds I could give for it.

112. And isn't that what Moore wants to say, when he says he *knows* all these things?—But is his knowing it really what is in question, and not rather that some of these propositions must be solid for us?

113. When someone is trying to teach us mathematics, he will not begin by assuring us that he *knows* that $a + b = b + a$.

114. If you are not certain of any fact, you cannot be certain of the meaning of your words either.

115. If you tried to doubt everything you would not get as far as doubting anything. The game of doubting itself presupposes certainty.

116. Instead of "I know . . .", couldn't Moore have said: "It stands fast for me that . . ."? And further: "It stands fast for me and many others. . . ."

117. Why is it not possible for me to doubt that I have never been on the moon? And how could I try to doubt it?

First and foremost, the supposition that perhaps I have been there would strike me as *idle*. Nothing would follow from it, nothing be explained by it. It would not tie in with anything in my life.

When I say "Nothing speaks for, everything against it," this presupposes a principle of speaking for and against. That is, I must be able to say what *would* speak for it.

118. Now would it be correct to say: So far no one has opened my skull in order to see whether there is a brain inside; but everything speaks for, and nothing against, its being what they would find there?

119. But can it also be said: Everything speaks for, and nothing against the table's still being there when no one sees it? For what does speak for it?

120. But if anyone were to doubt it, how would his doubt come out in practice? And couldn't we peacefully leave him to doubt it, since it makes no difference at all?

121. Can one say: "Where there is no doubt there is no knowledge either"?

122. Doesn't one need grounds for doubt?

123. Wherever I look, I find no ground for doubting that. . . .

124. I want to say: We use judgments as principles of judgment.

125. If a blind man were to ask me "Have you got two hands?" I should not make sure by looking. If I were to have any doubt of it, then I don't know why I should trust my eyes. For why shouldn't I test my eyes by looking to find out whether I see my two hands? What is to be tested by what? (Who decides what stands fast?)

And what does it mean to say that such and such stands fast?

126. I am not more certain of the meaning of my words than I am of certain judgments. Can I doubt that this colour is called "blue"?

(My) doubts form a system.

127. For how do I know that someone is in doubt? How do I know that he uses the words "I doubt it" as I do?

128. From a child up I learnt to judge like this. This is judging.

129. This is how I learned to judge; this I got to know as judgment.

130. But isn't it experience that teaches us to judge like this, that is to say, that it is correct to judge like this? But how does experience teach us, then? We may derive it from experience, but experience does not direct us to derive anything from experience. If it is the ground of our judging like this, and not just the cause, still we do not have a ground for seeing this in turn as a ground.

131. No, experience is not the ground for our game of judging. Nor is its outstanding success.

132. Men have judged that a king can make rain; we say this contradicts all experience. Today they judge that aeroplanes and the radio etc. are means for the closer contact of peoples and the spread of culture.

133. Under ordinary circumstances I do not satisfy myself that I have two hands by seeing how it looks. Why not? Has experience shown it to be unnecessary? Or (again): Have we in some way learnt a universal law of induction, and do we trust it here too?—But why should we have learnt one universal law first, and not the special one straight away?

134. After putting a book in a drawer, I assume it is there, unless. . . . "Experience always proves me right. There is no well attested case of a book's (simply) disappearing." It has often happened that a book has never turned up again, although we thought we knew for certain where it was.—But experience does really teach that a book, say, does not vanish away. (E.g. gradually evaporate.) But is it this experience with books etc. that leads us to assume that such a book has not vanished away? Well, suppose we were to find that under particular novel circumstances books did vanish away.—Shouldn't we alter our assumption? Can one give the lie to the effect of experience on our system of assumption?

135. But do we not simply follow the principle that what has always happened will happen again (or something like it)? What does it mean to follow this principle? Do we really introduce it into our reasoning? Or is it merely the natural law which our inferring apparently follows? This latter it may be. It is not an item in our considerations.

136. When Moore says he knows such and such, he is really enumerating a lot of empirical propositions which we affirm without special testing; propositions, that is, which have a peculiar logical role in the system of our empirical propositions.

137. Even if the most trustworthy of men assures me that he knows things are thus and so, this by itself cannot satisfy me that he does know. Only that he believes he knows. That is why Moore's assurance that he knows . . . does not interest us. The propositions, however, which Moore retails as examples of such known truths are indeed interesting. Not because anyone knows their truth, or believes he knows them, but because they all have a similar role in the system of our empirical judgments.

138. We don't, for example, arrive at any of them as a result of investigation.

There are e.g. historical investigations and investigations into the shape and also the age of the earth, but not into whether the earth has existed during the last hundred years. Of course many of us have information about this period from our parents and grandparents; but mayn't they be wrong?—"Nonsense!" one will say. "How should all these people be wrong?"—But is that an argument? Is it not simply the rejection of an idea? And perhaps the determination of a concept? For if I speak of a possible mistake here, this changes the role of "mistake" and "truth" in our lives.

139. Not only rules, but also examples are needed for establishing a practice. Our rules leave loop-holes open, and the practice has to speak for itself.

140. We do not learn the practice of making empirical judgments by learning rules: we are taught *judgments* and their connexion with other judgments. A totality of judgments is made plausible to us.

141. When we first begin to *believe* anything, what we believe is not a single proposition, it is a whole system of propositions. (Light dawns gradually over the whole.)

142. It is not single axioms that strike me as obvious, it is a system in which consequences and premises give one another *mutual support*.

143. I am told, for example, that someone climbed this mountain many years ago. Do I always enquire into the reliability of the teller of this story, and whether the mountain did exist years ago? A child learns there are reliable and unreliable informants much later than it learns facts which are told it. It doesn't learn *at all* that that mountain has existed for a long time: that is, the question whether it is so doesn't arise at all. It swallows this consequence down, so to speak, together with *what* it learns.

144. The child learns to believe a host of things. I.e. it learns to act according to these beliefs. Bit by bit there forms a system of what is believed, and in that system some things stand unshakeably fast and some are more or less liable to shift. What stands fast does so, not because it is intrinsically obvious or convincing; it is rather held fast by what lies around it.

145. One wants to say "*All* my experiences shew that it is so". But how do they do that? For that proposition to which they point itself belongs to a particular interpretation of them.

"That I regard this proposition as certainly true also characterizes my interpretation of experience."

146. We form *the picture* of the earth as a ball floating free in space and not altering essentially in a hundred years. I said "We form the *picture* etc." and this picture now helps us in the judgment of various situations.

I may indeed calculate the dimensions of a bridge, sometimes calculate that here things are more in favor of a bridge than a ferry, etc. etc.,—but somewhere I must begin with an assumption or a decision.

147. The picture of the earth as a ball is a *good* picture, it proves itself everywhere, it is also a simple picture—in short, we work with it without doubting it.

148. Why do I not satisfy myself that I have two feet when I want to get up from a chair? There is no why. I simply don't. This is how I act.

149. My judgments themselves characterize the way I judge, characterize the nature of judgment.

150. How does someone judge which is his right and which his left hand? How do I know that my judgment will agree with someone else's? How do I know that this colour is blue? If I don't trust *myself* here, why should I trust anyone else's judgment? Is there a why? Must I not begin to trust somewhere? That is to say: somewhere I must begin with not-doubting; and that is not, so to speak, hasty but excusable: it is part of judging.

151. I should like to say: Moore does not *know* what he asserts he knows, but it stands fast for him, as also for me; regarding it as absolutely solid is part of our *method* of doubt and enquiry.

152. I do not explicitly learn the propositions that stand fast for me. I can *discover* them subsequently like the axis around which a body rotates. This axis is not fixed in the sense that anything holds it fast, but the movement around it determines its immobility.

153. No one ever taught me that my hands don't disappear when I am not paying attention to them. Nor can I be said to presuppose the truth of this proposition in my assertions etc., (as if they rested on it) while it only gets sense from the rest of our procedure of asserting.

154. There are cases such that, if someone gives signs of doubt where we do not doubt, we cannot confidently understand his signs as signs of doubt.

I.e.: if we are to understand his signs of doubt as such, he may give them only in particular cases and may not give them in others.

155. In certain circumstances a man cannot make a *mistake*. ("Can" is here used logically, and the proposition does not mean that a man cannot say anything false in those circumstances.) If Moore were to pronounce the opposite of those propositions which he declares certain, we should not just not share his opinion: we should regard him as demented.

156. In order to make a mistake, a man must already judge in conformity with mankind.

157. Suppose a man could not remember whether he had always had five fingers or two hands? Should we understand him? Could we be sure of understanding him?

158. Can I be making a mistake, for example, in thinking that the words of which this sentence is composed are English words whose, meaning I know?

159. As children we learn facts; e.g., that every human being has a brain, and we take them on trust. I believe that there is an island, Australia, of such-and-such a shape, and so on and so on; I believe that I had great-grandparents, that the people who gave themselves out as my parents really were my parents, etc. This belief may never have been expressed; even the thought that it was so, never thought.

160. The child learns by believing the adult. Doubt comes *after* belief.

161. I learned an enormous amount and accepted it on human authority, and then I found some things confirmed or disconfirmed by my own experience.

162. In general I take as true what is found in textbooks, of geography for example. Why? I say: All these facts have been confirmed a hundred times over. But how do I know that? What is my evidence for it? I have a world-picture. Is it true or false? Above all it is the substratum of all my enquiring and asserting. The propositions describing it are not all equally subject to testing.

163. Does anyone ever test whether this table remains in existence when no one is paying attention to it?

We check the story of Napoleon, but not whether all the reports about him are based on sense-deception, forgery and the like. For whenever we test

anything, we are already presupposing something that is not tested. Now am I to say that the experiment which perhaps I make in order to test the truth of a proposition presupposes the truth of the proposition that the apparatus I believe I see is really there (and the like)?

164. Doesn't testing come to an end?

165. One child might say to another: "I know that the earth is already hundreds of years old" and that would mean: I have learnt it.

166. The difficulty is to realize the groundlessness of our believing.

167. It is clear that our empirical propositions do not all have the same status, since one can lay down such a proposition and turn it from an empirical proposition into a norm of description.

Think of chemical investigations. Lavoisier makes experiments with substances in his laboratory and now he concludes that this and that takes place when there is burning. He does not say that it might happen otherwise another time. He has got hold of a definite world-picture—not of course one that he invented: he learned it as a child. I say world-picture and not hypothesis, because it is the matter-of-course foundation for his research and as such also goes unmentioned.

168. But now, what part is played by the presupposition that a substance A always reacts to a substance B in the same way, given the same circumstances? Or is that part of the definition of a substance?

169. One might think that there were propositions declaring that chemistry is *possible*. And these would be propositions of a natural science. For what should they be supported by, if not by experience?

170. I believe what people transmit to me in a certain manner. In this way I believe geographic, chemical, historical facts etc. That is how I *learn* the sciences. Of course learning is based on believing.

If you have learnt that Mont Blanc is 4000 metres high, if you have looked it up on the map, you *know* it.

And can it now be said: we accord credence in a way because it has proved to pay?

171. A principal ground for Moore to assume he never was on the moon is that no one ever wa-

the moon or *could* come there; and this we believe on grounds of what we learn.

172. Perhaps someone says "There must be some basic principle on which we accord credence", but what can such a principle accomplish? Is it more than a natural law of 'taking for true'?

173. Is it maybe in my power what I believe? or what I unshakeably believe?

I believe that there is a chair over there. Can't I be wrong? But, can I believe that I am wrong? Or can I so much as bring it under consideration?—And mightn't I also hold fast to my belief whatever I learned later on?! But is my belief then *grounded*?

174. I act with *complete* certainty. But this certainty is my own.

175. "I know it" I say to someone else; and here there is a justification. But there is none for my belief.

176. Instead of "I know it" one may say in some cases "That's how it is—rely upon it." In some cases, however "I learned it years and years ago"; and sometimes: "I am sure it is so."

177. What I know, I believe.

178. The wrong use made by Moore of the proposition "I know . . ." lies in his regarding it as an utterance as little subject to doubt as "I am in pain". And since from "I know it is so" there follows "It is so", then the latter can't be doubted either.

179. It would be correct to say: "I believe . . ." has subjective truth; but "I know . . ." not.

180. Or again "I believe . . ." is an 'expression', but not "I know . . .".

181. Suppose Moore had said "I swear . . ." instead of "I know . . .".

182. The more primitive idea is that the earth *never* had a beginning. No child has reason to ask himself how long the earth has existed, because all change takes place *on* it. If what is called the earth really came into existence at some time—which is

hard enough to picture—then one naturally assumes the beginning as having been an inconceivably long time ago.

183. "It is certain that after the battle of Austerlitz Napoleon. . . Well, in that case it's surely also certain that the earth existed then."

184. "It is certain that we didn't arrive on this planet from another one a hundred years ago." Well, it's as certain as such things *are*.

185. It would strike me as ridiculous to want to doubt the existence of Napoleon; but if someone doubted the existence of the earth 150 years ago, perhaps I should be more willing to listen, for now he is doubting our whole system of evidence. It does not strike me as if this system were more certain than a certainty within it.

186. "I might suppose that Napoleon never existed and is a fable, but not that the *earth* did not exist 150 years ago."

187. "Do you *know* that the earth existed then?"— "Of course I know that. I have it from someone who certainly knows all about it."

188. It strikes me as if someone who doubts the existence of the earth at that time is impugning the nature of all historical evidence. And I cannot say of this latter that it is definitely *correct*.

189. At some point one has to pass from explanation to mere description.

190. What we call historical evidence points to the existence of the earth a long time before my birth;—the opposite hypothesis has *nothing* on its side.

191. Well, if everything speaks for an hypothesis and nothing against it—is it then certainly true? One may designate it as such.—But does it certainly agree with reality, with the facts?—With this question you are already going round in a circle.

192. To be sure there is justification; but justification comes to an end.