

Hinge Propositions and the Serenity Prayer

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I

G.E. Moore's "A Defence of Common Sense" was first published in 1925 and his "Proof of an External World" fourteen years later.¹ Apparently Wittgenstein had a long-standing interest in these papers and during the last eighteen months of his life, stimulated² by discussions with Norman Malcolm while his house-guest in Ithaca in 1949, he composed the four short sets of rough notes we now have as *On Certainty*. The pre-occupation of these notes³ with Moore's two papers, even when Moore is not being explicitly mentioned, is evident to anyone who reads them with those discussions in mind. Perhaps the single most prominent and distinctive theme of these last writings of Wittgenstein is his insistence on a contrast, missing from Moore, between knowledge properly so regarded—that is, a state of cognitive *achievement*, based on completed enquiry—and a much wider class of *certainities*: propositions which "stand fast" for us not because they have won through under scrutiny of relevant evidence but because, so he suggests, they are somehow presuppositional and basic in the very process of gathering and assessing evidence or within our more general 'world picture'. My primary interest here is in the analytical taxonomy of these "certainities", but an underlying concern will be with whether Wittgenstein succeeded in pointing to a principled and stable form of response to the problem which Moore had been concerned with—that of scepticism concerning the external world.

Moore regarded the propositions in question as part of our knowledge and clearly felt that he had the authority of common-sense on his side. Wittgenstein takes this to be an important mistake. He writes:

"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."

Here the image of the axis is crucial. Its point is that nothing *external* holds these basic certainities in place: they are not grounded, solid foundations after the fashion of the classical Carte-

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1. Both papers are reprinted in Moore's *Philosophical Papers*. Page references to them are to that volume.
 2. The Editors of *On Certainty* say: "goaded".
 3. Actually, as Michael Williams has pointed out to me, the four parts of the text display something of a thematic division: the first and second parts, comprising respectively §§1–65 and §§66–192, are naturally read as mainly centred on Moore's "Proof", while the rest of the book—§§193–299 and 300–676—is primarily reaction to the "Defence".

sian aspiration—foundations of the kind which primitive and especially sure cognitive achievements would provide:

“94. [...] 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.”

Thus so far from being products of empirical investigation—cognitive achievements—Wittgenstein is proposing that the propositions in question play a pivotal role in our *methodology* of empirical investigation and thereby contribute to the background necessary to make cognitive achievement possible, a background without which the acquisition of knowledge would be frustrated by a lack of *regulation*:

“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.”

“83. The *truth* [—he had better mean: not the fact of the truth but our *acceptance* as true, C.W.]—of certain empirical propositions belongs to our frame of reference.”

A little more explicitly:

“400. Here I am inclined to fight windmills, because I cannot yet say the thing I really want to say.

401. I want to say: propositions of the form of empirical propositions, and not only propositions of logic, form the foundation of all operating with thoughts (with language). — This observation is not of the form ‘I know ...’. ‘I know ...’ states what *I* know, and that is not of logical interest.”

This sheds light on the character of Wittgenstein’s interest in Moore’s discussions. What, it would seem, impressed him about “A Defence of Common Sense” in particular was not its official line—Moore’s insistence that “I know, with certainty” each of the propositions he there listed, while conceding that he did not know their “correct analysis”—but the *contents* of the list and the reminder of the special place of these propositions which Moore, almost without realising it, contrived to provide:

“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 judgements.

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."

The immediate and crucial issue, of course, is what exactly the "peculiar logical role" of the propositions in question is supposed to be.

II

On Certainty presents a number of ideas about that. One relatively clear and salient notion is proposed in the passage which introduces the famous metaphor of the river-bed. It runs in full as follows:

"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 [—cf. 95,⁴ quoted above, C.W.—] 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 [sic, C.W.] 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."

This passage is commonly—and naturally—read as resonating with the so-called Duhem-Quine thesis, that propositions confront experience not individually but in integrated clusters,

4. References by numbered paragraph are to *On Certainty* unless otherwise indicated.

thereby presenting a range of revisionary options when awkward cases arise.⁵ The ‘hardened’ propositions would then be those to which we accord a relative (or even something verging on absolute) immobility, so that the revisionary impact is channelled, via the lines of integration, elsewhere.

Although Wittgenstein was explicitly setting his sights on “propositions of the form of empirical propositions, and not only propositions of logic”, he was—like Quine after him, and independently—attracted by this thought as an account—or reconstruction—of our intuitive conception of the *necessity* (or analyticity: Quine made no distinction) of logic and mathematics (the “hardness” of the logical ‘must’.⁶) Necessity, on this proposal, is a matter of (near-)absolute *entrenchment*: the necessity of $13 + 7 = 20$, for instance, consists in the fact that we so use that proposition that nothing is allowed to falsify it.⁷ Imagine that you count the pieces of fruit in a bowl containing just satzumas and bananas. You get thirteen satzumas and then seven bananas but when you count all the fruits together, you get twenty-one. Yet you seem to have made no mistake, and no piece of fruit is added or removed—so it seems—during the three counts. So you have evidence for each of the following four propositions individually:

that there are thirteen satzumas in the bowl;
that there are seven bananas in the bowl;
that there are twenty-one pieces of fruit in the bowl;
that every piece of fruit in the bowl is a satzuma or a banana.

Then according to the mooted account, the necessity of $13 + 7 = 20$ is somehow grounded in the fact that such appearances are not *allowed* collectively to stand as veridical. Rather, we inexorably dismiss them out of hand—“You must have miscounted somewhere”, “Another piece of fruit must somehow have been slipped in”, etc.⁸ The rule is that $13 + 7 = 20$, is to “stand fast”, so the appearances are accordingly discounted and an obligation thereby created—if the situation is to be explained—that fault be found with at least one in particular of the four propositions and hence with the evidence that provides for the appearance of their simultaneous truth:

“655. The mathematical proposition has, as it were officially, been given the stamp of incontestability, I.e.: ‘Dispute about other things; *this* is immovable — it is a hinge on which your dispute can turn.’”

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5. Since the Duhem-Quine thesis concerns the bearing of *disconfirming* evidence, it is not to be directly conflated with the thesis of the information-dependence of empirical confirmation. However they are obviously closely related. I won’t attempt to explore the details of the relationship here.
 6. Remarks on the Foundations of Mathematics I, 121.
 7. Recall also:
“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 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 ever formulated.
 88. It may be formulated for example that *all enquiry on our part* is set so as to exempt certain proposition from doubt, if they are ever formulated. They lie apart from the route travelled by enquiry.”
 8. Cf. Remarks on the Foundations of Mathematics I, 118.

However—its distinguished provenance notwithstanding—there is cause to regard this as a quite misguided proposal about logical and mathematical necessity. In effect, it conflates necessity with confidence.⁹ The judgement that a proposition, *P*, holds of necessity may without any incongruity be quite *tentative*, and this tentativeness may extend to the judgement that *P* itself. That will be the situation, for instance, wherever one judges tentatively that *P* but confidently that if *P*, then necessarily *P*. There are such cases even when the necessity in question is conceptual. An example might be a formal axiom proposed as a faithful capture of some informal mathematical concept, or a purported explication of one, like Church's Thesis. The judgement that *P* is necessary is a (possibly qualified) judgement *about P* with a particular content—the content, roughly, that the proposition may be relied upon in reasoning about an arbitrary *hypothetical* situation. It is not (just) a judgement *of P*—i.e. of *P*'s *actual* truth—made with especial sureness. It is simply a muddle to identify the two.

Although the Wittgensteinian (Quinean) idea therefore offers a lame account of the *meaning* of a claim of logical or mathematical necessity, we can acknowledge that the *kind of usage* to which the quoted passages from *On Certainty* invite attention is nevertheless importantly characteristic of basic logical and mathematical propositions in empirical application. But presumably Wittgenstein meant more than merely to log a reminder of this aspect of their use. Individual experiences, when they are mistaken, do not themselves communicate that they are. The conception of experience as a *fallible* indicator of how matters stand in the world is wholly dependent on our possession of principles for appraising *clusters* of experiences and adjudging them collectively misleading—“recalcitrant” in Quine's favoured vocabulary. If we lacked any principled way of undertaking such appraisal, we would lack the means for empirical belief revision and thereby—arguably—empirical belief itself. Wittgenstein's underlying idea, prominent both in *On Certainty* and the *Remarks on the Foundations of Mathematics*, is that (some of) the needed principles of appraisal are provided in the guise of the certainties of elementary logic and mathematics; and that the unwavering—dogmatic—confidence we repose in these propositions, rather than being the product of a different kind of—superlatively sure, *a priori*—form of cognition, attaches to them in their role as in effect *rules*: norms of enquiry whose job it is to regulate the appraisal of empirical evidence after the fashion I illustrated whereby the proposition that $13 + 7 = 20$ determines that the experiences which motivate the four listed propositions may not all be allowed to stand as veridical.

This general idea contrasts with a more traditional, rationalist way of seeing things. According to traditional rationalism, the non-veridicality of the pool of experiences which collectively motivate the four listed propositions would be regarded as a *prior fact*: it is, as it were, *already* the case that the four propositions are mutually inconsistent, whatever principles of appraisal we do or don't use, and a sound arithmetic had better respect the point. On this view, logic and mathematics are answerable to predetermined constraints incorporated in the antecedent meanings of the statements among which they provide for inferential traffic. The rejection of this general conception is a dominant theme of the *Remarks on the Foundations of Mathematics*.¹⁰

9. Cf. McFetridge 1990, 150–4.

10. —typified by this passage (Remarks on the Foundations of Mathematics I, 156): “[...] the reason why [logical inferences] are not brought in question is not that they ‘certainly correspond to the truth’—or something of the sort, no, it is just this that is called ‘thinking’, ‘speaking’, ‘inferring’, ‘arguing’. There is not any question at all here of some correspondence between what is said

It belongs with the general rejection in Wittgenstein's later work of the broad conception of the relationship between language and the world which he had lionised in the *Tractatus*, and the associated invention of a category of "grammatical" propositions whose role, rather than to reflect aspects of any supposed kind of logical, mathematical or metaphysical reality, is to regulate the language game and thereby to play a role in constituting the meanings of moves within it.

What is new in *On Certainty* is the extension of this radical and problematical thought to empirical-seeming propositions, and also its qualification—allowing for its extension to yet a further range of examples—in two ways. First, it is now emphasised that the resilience accorded to such norms in the face of awkward experiences need not be absolute—it can be a matter of degree, so that a proposition which functions for a time as a norm may eventually, in the light of empirical developments, be deprived that role.¹¹ That kind of shift is explicitly canvassed in the river-bed passage and it is, of course, precisely the kind of transformation which Quine, in "Two Dogmas", urged as a possibility even for basic logic and mathematics. Second, the regulative role of empirical propositions which have been 'hardened' may be relativised to context, so that a proposition which in some circumstances functions as a norm of empirical enquiry may in others be its object. Such is the status, Wittgenstein suggests, of "I have two hands":

"250. My having two hands is, in normal circumstances, as certain as anything that I could produce in evidence for it.

That is why I am not in position to take the sight of my hand as evidence for it."

In normal circumstances, "I have two hands" will function as a norm. My certainty that I have two hands will "stand fast" above the flow of evidence making, e.g., the sight of my hands into a confirmation of the functioning of my visual system, rather than of their existence. By the same token, were I to have a—visual, or tactual—impression that I did *not* have two hands, then I should treat it just on that account as unreliable. But of course in abnormal circumstances—when I am recovering consciousness after surgery in which doctors have tried to save my badly damaged hand, or emerging in shock from the debris of a terrorist bomb attack—the proposition becomes a straightforwardly empirical one.

Against this, there is an inclination to protest that—rather than calling attention to any rule-like function—the example merely attests to the differing degrees of *empirical* confidence that may attach to one and the same proposition in different circumstances. But I do not think Wittgenstein needs to be read as saying anything antithetical to the idea that one's confidence e.g. that one has two hands is ultimately empirically based. The thrust is rather that if your certainty that you have two hands would dominate a sensory impression that represented them as *missing*, then you are implicitly prioritising one kind of evidence—something like: your lifelong experience of yourself as handed, together with the absence from your experience of any wor-

and reality; rather is logic *antecedent* to any such correspondence; in the same sense, that is, as that in which the establishment of a method of measurement is *antecedent* to the correctness or incorrectness of a statement of length."

The attempt to understand this attitude of Wittgenstein's was a central preoccupation of my *Wittgenstein on the Foundations of Mathematics*.

11. He had allowed in *Remarks on the Foundations of Mathematics* that the contrast was not a sharp one—that it "shades off in all directions" (VII, 6)—but the idea of propositions' "crossing the house", as it were, seems to be new to *On Certainty*.

rying tendency of material objects abruptly and inexplicably to go missing—over another. And that priority is not itself justified by *experience*:

“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.”

When a statement such as “I have two hands” functions as a norm of description, it may still express an empirically based belief. But the Wittgensteinian point is that its normative role is not imposed by that empirical basis. In treating the proposition as a norm, we are implicitly taking it that the basis in question constitutes *superior* evidence. And it is not itself a thesis justified by experience that the evidence in question is superior:

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

Again: norms-in-context, as we might call them, may have evidential support drawn from outside the relevant context. But if they do, their relative certainty will reflect an assessment of the weight of that support which is not itself evidentially grounded but belongs with the ‘logic’ of the language-game.

III

‘Hardened’ propositions are, however, only one of a number of different kinds of example offered in Wittgenstein’s notes of the overarching idea expressed in the following celebrated passage:

“341. [...] the *questions* that we raise and our *doubts* depend on the fact that some propositions are exempt from doubt, are as it were like hinges on which those turn.

342. That is to say, it belongs to the logic of our scientific investigations that certain things are *in deed* not doubted.

343. But it isn’t that the situation is like this: We just *can’t* investigate everything, and for that reason we are forced to rest content with assumption. If I want the door to turn, the hinges must stay put.

344. My *life* consists in my being content to accept many things.”

That overarching idea is, roughly that empirical practice—having a ‘life’—presupposes unearned certainties, propositions “exempt from doubt”. Propositions which serve in one way or another as rules for our “scientific investigations” are natural candidates for such ‘hinge’ status.

But how far does the range of unearned certainties extend? Maybe mathematical propositions have “as it were officially, been given the stamp of incontestability” but, Wittgenstein writes,

“656. [...] one can *not* say that of the proposition that *I* am called L.W. Nor of the proposition that such-and-such people have calculated such-and-such a problem correctly.

This is a peculiar passage. To be sure, the proposition which identifies my name would be naturally classified along with “I have two hands” as a potential norm-in-context: a proposition whose relative certainty would dominate *prima facie* evidence to the contrary—for instance, the persistent delivery to my home of mail addressed otherwise—in much the manner in which “I have two hands” might dominate a failure to perceive one’s hands when very cold in pitch darkness. So 656 might reasonably be taken as emphasising a difference between norms-in-context and “officially” incontestable, or “fossilised” (657) propositions, like those of simple mathematics. But then what are we to make of Wittgenstein’s pairing of “I am called L.W.” with—to make what I take it is an irrelevant reformulation—“This calculation has been done correctly”. Norms-in-context present what we may call *standing* certainties—certainties one *brings to* any normal context, as contrasted with convictions *acquired in* a particular context. But that such-and-such a calculation has been done correctly would be verified by a routine investigation—it would seem to be a case of normal *knowledge*, resting on cognitive achievement and concerning a specific situation. It does not seem to be, in the sense that interests us, a ‘hinge’ at all. So what comparison is Wittgenstein making?

Possibly this. It is a common characteristic of some standing certainties—like “I am called so-and-so”—and some contextually acquired ones—like “That calculation has been done correctly”—that our confidence in them is fundamental in the sense that disturbing it would be epistemically catastrophic:

“490. [...] not only do I never have the slightest doubt that I am called that, but there is no judgement I could be certain of if I started doubting about that.”¹²

To doubt that I rightly take my name to be ‘Crispin Wright’ would have the effect of putting in jeopardy a huge amount of what I normally take for granted about myself—how could I be mistaken about my name unless I am mistaken about enormously much else besides? A shadow would be cast over all of the large framework of personal beliefs in which my life—my history, family and projects—are defined for me, and thereby implicitly over all the routine empirical means by which I have arrived at them and had them reinforced on countless occasions. But

12. Here is how the thought continues:

“491. ‘Do I know or do I only believe that I am called L.W.?’—Of course, if the question were ‘Am I certain or do I only surmise ...?’, then my answer could be relied on.

492. ‘Do I know or do I only believe ...?’ might also be expressed like this: What if it seemed to turn out that what until now has seemed immune to doubt was a false assumption? Would I react as I do when a belief has proved to be false? or would it seem to knock from under my feet the ground on which I stand in making any judgement at all?—But of course I do not intend this as a prophecy.

Would I simply say ‘I should never have thought it’—or would I (have to) refuse to revise my judgement—because such a ‘revision’ would amount to an annihilation of all yardsticks?”

this is true of some contextually acquired certainties as well: how could I be mistaken about the correctness of this calculation (after I have checked and double-checked it, asked you to do the same, and so on) without calling into question the reliability of my best methods of checking such things and indeed my senses and faculties in general?

“If I don’t trust this evidence, why should I trust *any* evidence?” (672, my emphasis)

So Wittgenstein appears to have in mind at least two different distinctions: on the one hand, that between rules governing enquiry and the propositional objects of enquiry; and on the other, that between beliefs whose revision would consist with our general methodology for appraising belief and beliefs to jettison which would be potentially catastrophic, leaving us with no principled conception of what kind of evidence might generally be relied upon in other contexts. But there is an underlying more general notion: it is the idea of a ‘hinge’ proposition as a kind of ‘certainty of methodology’, as it were—a proposition a doubt about which would somehow commit one to doubting not just particular beliefs which we already hold but aspects of the way we habitually appraise beliefs, “our method of doubt and enquiry”.

Very well. But how does this incipient taxonomy connect with the kind of ‘hinge’ illustrated in this passage?—

“208. I have a telephone conversation with New York. My friend tells me that his young trees have buds of such and such a kind. I am now convinced that his tree is ... Am I also convinced that the earth exists?

209. The existence of the earth is rather part of the whole *picture* which forms the starting-point of belief for me.

210. Does my telephone call to New York strengthen my conviction that the earth exists? Much seems to be fixed, and it is removed from the traffic. It is so to speak shunted onto an unused siding.

211. Now it gives our way of looking at things, and our researches, their form. Perhaps it was once disputed. But perhaps, for unthinkable ages, it has belonged to the *scaffolding* of our thoughts. (Every human being has parents.)”

The initial question of 210 is of course rhetorical. But the metaphor of “shunting onto an unused siding”, followed by “Perhaps it was once disputed”, reveals that Wittgenstein is not fully clear about the example—about what is distinctive about it. If a proposition is to serve as a norm of enquiry in the manner of either of the two models earlier distinguished—the respective models of “ $13 + 7 = 20$ ” and “I have two hands”—then it has to be such as to allow of at least *potentially* disconfirming experience. If it is to be significant to speak of exempting a proposition from doubt, it has first to be such that experience might otherwise, in a context of suitable other beliefs, call it into question—might seem to go against it. And whatever its merit as a proposal about the status in our thought of some of his examples, this general idea is not apt for propositions like ‘The earth exists’ (210), ‘The earth has existed during the last hundred years’ (138), ‘The earth has existed for many years past’ (411) and ‘This table remains in existence

when no one is paying attention to it' (163). There is no content in the image of our long ago removing "The earth exists" from the hurly-burly of empirical rail-traffic unless we can envisage how the use of that proposition might have gone in a setting *before* it got "shunted onto an unused siding"—becoming part of the "scaffolding" of our thought. For what might we *ever* have counted as potential evidence *against* the existence of the earth? Here there is simply no clear content to the idea of even a *prima facie* disconfirmation, so any comparison with norms-in-context or more completely 'fossilised' norms is inappropriate. Evidence cannot count against this proposition—nor against "There are other minds", considered in the context of my normal experience of the living activity of other human beings, nor against the Russellian example, "The world did not come into being five minutes ago, filled with apparent traces of a much more extended history". Something different needs to be said about these examples, (henceforward "Proper Hinges").

The other point of comparison—that a doubt would involve extensive undermining of investigative procedures and norms of assessment—is more apt. Suspension of confidence in a Proper Hinge would indeed have the effect of undermining a whole genre of evidence and thereby disabling all empirical enquiry—into the past, or the future, or the external material world, or the mental states of others—of one particular very general kind. But there is a difference here as well, to do with *how* a doubt would generate this destructive effect. Before, we had in view a class of propositions doubting which would mean doubting the weight of a body of evidence which is normally taken overwhelmingly to support them, and therefore being forced to doubt the relevance of that evidence; in short, propositions such that, as Wittgenstein puts it, everything speaks for them and nothing against them (203). But the peculiarity of Proper Hinges is that in doubting such a proposition, one would *not* be setting oneself against any overwhelming body of evidence. If sense experience, for instance, or the movements of other human beings straightforwardly provided evidence for the existence of a material world, or of other minds, scepticism would present little intellectual challenge. The peculiarity of Proper Hinges is just the point that scepticism fastens on: that they are, arguably, not merely immune to empirical disconfirmation but beyond *supportive* evidence too. Rather than being recipients of (overwhelming) evidence, these propositions work to condition our conception of the evidential relevance of, e.g., the data of our senses and the movements of others. They channel empirical enquiry not by exemption from disconfirmation, nor by depth of evidential entrenchment, but by determining our overall conception of the world in which we live—the whole idea that there is matter, and other minds, and an extended past and future, for instance—and hence our very notion, at the most general level, of the kind of thing that exists for enquiry to teach us.

IV

Let's take stock. No doubt a much more fine-grained account of Wittgenstein's (and Moore's) examples would be possible, but we have done enough to suggest the following loose generic characterisation of the "hinges on which our doubts turn". Such beliefs are ones whose rejection would rationally necessitate extensive re-organisation of—or more, might even just throw into confusion—our highly complex conception of what kind of thing should be taken as evidence for what kind of proposition. We have observed three salient classifications:

Propositions (simple arithmetical equalities, “I have two hands”) which it is our practice, always or normally, to insulate from disconfirming evidence, and which thereby serve as, in effect, rules for the evaluation—re-direction—of the significance of such evidence;

Propositions (“My name is CW”, “This calculation is correct”) which are supported by—by normal standards—an overwhelming body of evidence, whose significance would have to be overridden if they were doubted;

Proper Hinges (“The earth exists”, “Physical objects continue to exist when unperceived”, “The earth has existed for many years past”) to doubt which would have the effect of undermining our confidence in a whole species of proposition, by calling into question the bearing of our most basic kinds of evidence for propositions of that kind.

These groupings capture, as we have seen, a variety of significantly different kinds of case, the most important dimension of difference being what kind of evidential support their members in principle allow of or whether they allow of evidential support at all. The cases are however unified—so I read Wittgenstein as suggesting—by their constituting or reflecting our implicit acceptance of various kinds of *rules of evidence*: rules for assessing the specific bearing of evidence among a range of germane propositions, rules for assessing the priorities among different kinds of evidence, and rules connecting certain kinds of evidence with certain kinds of subject matter. One dominant theme of *On Certainty* is that some things that Moore misguidedly took himself to know are actually effectively the articulation, in declarative propositional garb, of such rules, our unhesitating acceptance of which allows of no defence in terms of the idea of knowledge. And the reader forms the impression—though I do not know that it could be decisively corroborated by explicit quotation—that it was meant to go with that theme that our accepting the propositions in question is likewise not to be *criticised* in terms of the idea of *failure* of knowledge. “The Sceptic’s” attack was to be preempted by the same idea that undercuts Moore’s “Defence”.

But how *exactly* might the reflections outlined contribute towards the dissolution of sceptical doubt? The central thrust of knowledge-sceptical argument, of whatever stripe, is after all precisely that what we count as the acquisition of knowledge, or justification, rests on groundless presuppositions. So far from saying anything to offset that charge, Wittgenstein can seem vulnerable to the complaint that he has merely elaborated the theme. How does it help to have a reminder in detail of the various *kinds* of groundless assumption that we make? So long as it is uncontested that these assumptions *are* both essential—in the sense that we cannot avoid them—and groundless—in the sense that we can produce no reason for thinking them to be true—isn’t the sceptical point effectively taken? Yet Wittgenstein is completely explicit:

“253. At the foundation of well founded belief lies belief that is not founded.”

Since *On Certainty* is not a sceptical treatise, Wittgenstein’s idea can only be that taking the point about groundlessness doesn’t impose the consequences usually thought to attach it—in particular, that to recognise that enquiry is inevitably founded on unfounded beliefs need not call all our procedures into question, or expose them as being somehow arbitrary and irrational, or open the flood gates to all manner of prejudice and dogma. But how are those consequences avoided?

It may seem obvious. The key idea, someone may say, is surely that of *rule*. In each of the three kinds of case we have distinguished, it is the suggestion of *On Certainty* that a proposition's "standing fast" for us is to be attributed to its playing a role in or reflecting some aspect of *the way we regulate* enquiry, rather than being presumed—erroneously—to be an especially solid *product* of it. Sceptical argument purports to disclose a lack of cognitive pedigree in a targeted range of commitments. Rules, however, *don't need* a cognitive pedigree. The *merit* of a rule may be discussible: rules can be inept, in various ways. But, since they *define* a practice, they cannot be *wrong*. Any sort of *sceptical* concern about our warrant to accept a proposition whose role is actually to express or otherwise reflect such a rule is thus a kind of *ignoratio elenchi*.

That's a possible direction. And in some passages Wittgenstein certainly appears to have it in mind. Consider for instance:

"494. 'I cannot doubt this proposition without giving up all judgement.'

But what sort of proposition is that? ... It is certainly no empirical proposition. It does not belong to psychology. It has rather the character of a rule.

495. One might simply say, 'O, rubbish!' to someone who wanted to make objections to the propositions that are beyond doubt. That is, not reply to him but admonish him.

496. This is a similar case to that of showing that it has no meaning to say that a game has always been played wrong."

However the thought is, of course, much too swift. For one thing, it won't cover all the cases: if the account given of norms-in-context is as proposed above, then their normative status *does* presuppose a degree of cognitive pedigree and might therefore be undercut by a successful sceptical attack on that. But the real trouble is more general. Rules governing a practice can be excused from any external constraint—so just "up to us", as it were—only if the practice itself has no overall point which a badly selected rule might frustrate. But that is hardly how we think of empirical enquiry. Empirical enquiry does *par excellence* have an overall point, viz.—it may seem the merest platitude to say—the divination of what is true and the avoidance of what is false of the world it concerns. So "rules of evidence" must presumably answer to this overall point. It will therefore seem as though there has to be a good question whether and with what right we suppose that the rules we actually rely on in empirical enquiry are conducive to that point. Let it be that the certainty of basic arithmetic, for example, reflects its regulative role, its serving as a constraint upon the acceptance of certain kinds of sequences of appearances as veridical and hence as a control upon the use of statements such as "You miscounted somewhere along the line" and "Another object was added to the group while the count was in progress" which it bids us to affirm when, e.g., things do not 'add up'. Still, these would seem to be claims with an *independent meaning* and—presumably, at least in a wide class of cases—determinate truth-values. To regard simple arithmetic as a compendium of rules for the appraisal of evidence therefore provides no easy escape from the thought that, in making such appraisals, it is a prime desideratum that we not be led to *mis-assess* the truth-values of such non-arithmetical statements as lie within its sphere of influence. To re-

gard arithmetic—and logic—as regulative of the ‘language-game’ does not enjoin that they should be absolved from *conservativeness* with respect to the correct assessment of the statements whose use they regulate.

An analogous point engages our practices of treating one kind of evidence as superior to another. Of course there is a complex ranking here: it matters, for instance, whether perceptual impressions are repeatable and whether they are single- or multi-sense; how they stack up against memory impressions, and the products of empirical theorising; and how they relate to the testimony of others. I suggested that when an empirical proposition is treated as a norm-in-context—in the fashion of “I have two hands”—that will reflect aspects of this background ranking. But the point of the ranking—one would naturally suppose—is to lead one to give relative weight, in cases of conflict, to the species of evidence that are most likely to promote true belief. So, again, the ranking has an external objective, and one cannot absolve it from all concern about its fitness for that just by reflecting that the priorities it involves have the character for us of rules of procedure.

But the case of Proper Hinges is perhaps the most stark of all. To allow that “The earth has existed for many years past” serves as a rule of evidence—plays a role in determining our conception of the significance of presently available states and processes—is not even *superficially* in tension with thinking of it as a substantial proposition, apt to be true or false. It goes without saying that our conception of the significance of items of evidence we gather will depend on what kind of world we take ourselves to be living in. That in no way banishes the spectre of profound and sweeping error in the latter regard.

Now, it would be perfectly fair to observe that this general kind of objection belongs with the rationalistic mind-set contrasted above with the outlook on logic and mathematics which permeates the *Remarks on the Foundations of Mathematics*. It is thus anyway out of kilter with what seems to be the larger idea in the core writings of Wittgenstein’s later philosophy, underpinning the doctrine of logic and mathematics as ‘antecedent to truth’: the idea that the ‘rules of the language game’ precisely do *not* have to answer to anything external to it. According to the philosophy of language at work in the *Tractatus*, there is a separation between, on the one hand, what constitutes the *meaning* (truth-conditions) of a statement—which is a matter of an essential (in the *Tractatus*, indeed, pictorial) relation between the statement and a potential worldly truth-conferrer (‘fact’)—and, on the other, the rules which we accept as governing its *use*. So provision was made for a good metaphysical question about whether the latter—and the accepted practices they inform—are felicitous by the standards set by the former, whether there is the intended general correlation between the obtaining of what we treat as warrant for a statement, which will be a reflection of the rules of the language game, and the obtaining of the situation it depicts. By the time of the *Investigations*, by contrast, Wittgenstein has shifted to—indeed, perhaps invented—the type of outlook that Hilary Putnam later dubbed *internal realism* or *internalism*: now, it is our linguistic practice itself that is viewed as conferring meaning on the statements it involves—there is no meaning-conferrer standing apart from the rules of practice and no associated external goal.

The metaphysical crux is thus the idea of truth as an objective of empirical enquiry to which our rules of assessment are at best externally related. If I am to be seriously troubled by the thought that painstaking and conscientious appraisal by the standards of my actual linguistic practice may consist with massive but undetectable error generated by a quite mistaken conception of some large aspect of the world, then I must be thinking of what determines the *content*

of my beliefs as something extrinsic to that practice—with some version of the classical, molecular, truth-conditional account the only salient type of candidate. But while there is, to my knowledge, no evidence that Wittgenstein ever became uneasy with the opposed internalist vision of meaning and truth that had come to dominate his thinking by time of the *Investigations*, it is at least much less obtrusive in *On Certainty*. True, there are one or two suggestive passages. He writes, for instance:

197. It would be nonsense to say that we regard something as sure evidence because it is certainly true.

198. Rather we must first determine the role of deciding for or against a proposition.

199. The reason why the use of the expression ‘true or false’ has something misleading about it is that it is like saying ‘it tallies with the facts or it doesn’t’, and the very thing that is in question is what ‘tallying’ is here.”

And a little later:

“214. What prevents me from supposing that this table either vanishes or alters its shape and colour when no one is observing it, and then when someone looks at it again changes back to its old condition?—‘But who is going to suppose such a thing!’—one would feel like saying.

215. Here we see that the idea of ‘agreement with reality’ does not have any clear application.”

But such—infrequent—passages do more to raise the issue to which the ultimate intelligibility of sceptical doubt is hostage than propose a definite stand on it. In taking it for granted that Proper Hinges “might just be false”—as a matter of metaphysical bad luck, as it were—sceptical doubt sets out its stall against the internalism of the *Investigations*. The Proper Hinge is simply conceived as fitting the way of the world or not, whatever grip on the matter may or may not be possible for us. But if Wittgenstein at the time of his last notes regarded that view of such propositions as scepticism’s Achilles’ heel, he did not pause—beyond the suggestion that the idea of their “agreement with reality” has no “clear application”—to elaborate an opposing internalist perspective on them.

Internalism is a great metaphysical issue. Still, great as it may be, it is notoriously unclear and stubbornly difficult to resolve. And while thinking of linguistic practice in a broadly later-Wittgensteinian way may make at least some forms of sceptical doubt hard to hear, the fact remains that we—many of us—seem to ourselves to hear them quite clearly. That makes it intellectually unsatisfying just to point out that the ultimate intelligibility of sceptical doubt is hostage to deep and unresolved issues in the theory of meaning. Rather, what we should ideally like—as an insurance, if you will—would be a rebuttal of—or at least a ‘liveable’ accommodation with—sceptical doubt which avoids joining the debate at that deep theoretical level, leaving the intelligibility of scepticism unchallenged. If we are approaching the issues in this spirit, we will not be tempted to make much of the idea that at least some of the propositions targeted

by scepticism really lie *hors de combat*, functioning innocently as rules for the appraisal of evidence or—for whatever other reason—incapable of intelligible mismatch with the world.

V

So: can there be an *intuitive* accommodation with scepticism—one which raises no doubt about the intelligibility of the sceptical challenge? If Proper Hinges are viewed as no less descriptive or contingent than our more specific routinely formed beliefs about matter, mind and the past which they underwrite, is there some relatively benign ‘spin’ to be given to the evidentially isolated situation which scepticism argues they occupy—the situation in effect insisted on by Wittgenstein when he admonishes Moore for failing to recognise that such propositions are not, properly speaking, known? I shall suggest that there is—a quite different kind of response prefigured by one tendency in Wittgenstein’s remarks. I conclude by giving the briefest indication of it.

The passages I have in mind are typified by the following,

“163. [...]

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)?”

Compare

“337. One cannot make experiments if there are not some things that one does not doubt. But that does not mean that one takes certain presuppositions on trust. When I write a letter and post it, I take it for granted that it will arrive — I expect this.

If I make an experiment I do not doubt the existence of the apparatus before my eyes. I have plenty of doubts, but not *that*. If I do a calculation I believe, without any doubts, that the figures on the paper aren’t switching of their own accord, and I also trust my memory the whole time, and trust it without reservation. The certainty here is the same as that of my never having been on the moon.”

To take it that one has gained a warrant for a particular proposition by the appropriate exercise of certain appropriate cognitive capacities—perception, introspection, memory, or intellection, for instance,—always involves various kinds of presupposition. These presuppositions will include the proper functioning of the relevant capacities, the suitability of the occasion and circumstances for their effective function, and indeed the integrity of the very concepts involved in the formulation of the proposition in question. The crucial point made in the quoted passages is that one cannot but take certain such things for granted. By that I don’t mean that one could not investigate (at least some of) the presuppositions involved in a particular case. But in proceeding to such an investigation, one would then be forced to make further presuppositions of the same general kinds. Wherever one achieves warrant for a proposition, one’s doing so is sub-

ject to specific preconditions—about one's own powers and understanding of the issues involved and about the prevailing circumstances—for whose satisfaction one will have no specific, earned warrant. This is a necessary truth. I may, in any particular case, set about earning such a warrant in turn—and *that* investigation may go badly, defeating the presuppositions that I originally made. But whether it does or doesn't go badly, it will have its own so far unfounded—*unbegründet* (253)—presuppositions.

These presuppositions are not just one more kind of hinge propositions, as we have understood that term. Hinges, so far, are standing certainties, exportable from context to context (subject perhaps to certain restrictions on the receiving context.) Whereas the present range of cases are particular to the investigative occasion: they are propositions like that my eyes are functioning properly *now*, that the things that I am *currently* perceiving have not been extensively disguised so as to conceal their true nature, etc. My confidence in the things which I take myself to have verified in a particular context can rationally be no stronger than my confidence in these context-specific claims. Because of their context-specificity, they are not propositions whose rejection would involve epistemic catastrophe (though generalisations of which they are instances can be expected to have that feature.) Our certainty in them as a genre shows in the unhesitant way we set about routine empirical investigation of the world and our ready acceptance of its results.

While these context-specific propositions are thus set apart from the three kinds of hinge already noted, two points of analogy with Proper Hinges are nevertheless striking. First, both kinds of proposition articulate something a thinker must inevitably presuppose if she is to credit herself with the achievement of any warrants at all of a certain kind. Second, in any empirical enquiry (some) presuppositions of each kind will unavoidably be made without specific evidence on their behalf. And that much analogy is enough to conjure a form of sceptical argument. Suppose I set myself to count the books on one of the shelves in my office and arrive at the answer, 26. The sceptical thought will say that the warrant thereby acquired for that answer can rationally be regarded as no stronger than the grounds I have for confidence that I counted correctly, that my senses and memory were accordingly functioning properly, that the books themselves were stable during the count and were not spontaneously popping into and out of existence unnoticed by me, etc. Yet I will have done nothing—we may suppose—to justify my confidence in these specific presuppositions. So how have I achieved any genuine warrant at all?

Here is the line of reply on which I want to focus. Since there is *no such thing* as a process of warrant acquisition for each of whose specific presuppositions warrant has already been earned, it should not be reckoned to be part of the ordinary concept of an acquired warrant that it somehow aspire to this—incoherent—ideal. Rather, we should view each and every cognitive project as irreducibly involving elements of adventure—I *take a risk* on the reliability of my senses, the amenability of the circumstances, etc., much as I take a risk on the continuing reliability of the steering, and the stability of the road surface every time I ride my bicycle. For as soon as I grant that I ought ideally to check the presuppositions of a project, even in a context in which there is no particular reason for concern about them, then I should agree *pari passu* that I ought in turn to check the presuppositions of the check—which is one more project after all—and so on indefinitely. So then there will be no principled stopping point to the process of checking and the original project will never get started. The right conclusion—the reply will continue—is not that the acquisition of genuine warrant is impossible, but rather that since

warrant is acquired whenever investigation is undertaken in an *epistemically responsible* manner, epistemic responsibility cannot, *per impossibile*, involve an investigation of every presupposition whose falsity would defeat the claim to have acquired a warrant. The correct principle is not that any acquired warrant is no stronger than one's independently acquired reasons to accept its presuppositions. It is, rather, that it is no stronger than the warrant for any of the presuppositions about which there is some *specific reason* to entertain a misgiving.

This line of reply concedes that the best sceptical arguments have something to teach us—that the limits of justification they bring out are genuine and essential—but then replies then that, just for that reason, cognitive achievement must be reckoned to take place *within such limits*. To attempt to surpass them would result not in an increase in rigour or solidity but merely in cognitive paralysis.

The term 'entitlement' has recently come into vogue in epistemology to characterise—perhaps wishfully—a range of propositions which, although unable to make a compelling case on their behalf, a thinker can nevertheless somehow justifiably presuppose or make use of as part of the framework of other investigations. Usually, the idea has been intended in a way that presupposes a kind of division of epistemic labour: an ordinary thinker is entitled to beliefs which experts—local specialists, or even philosophers—can justify, even if she has absolutely no inkling of—indeed, perhaps could not understand—that justification if it were presented to her. However a somewhat different version of the idea emerges from the foregoing. First (to tidy up our so far somewhat free-wheeling use of the term) let us say that *P* is a *presupposition* of a particular cognitive enquiry if to doubt *P* would be a commitment to doubting the significance or competence of the enquiry. Then one kind of *entitlement* may be defined as a presupposition meeting the following two conditions: (i) there is no extant evidence against *P* and (ii) someone pursuing the relevant enquiry who accepted that there is nevertheless an onus to justify *P* would implicitly undertake a commitment to an infinite regress of justificatory projects, each concerned to vindicate the presuppositions of its predecessor.

That would stand refinement, but the general *motif* is clear enough. If a (type of) project (epistemic or otherwise) is either unavoidable or sufficiently valuable to us, and if the attempt to vindicate its presuppositions would raise presuppositions of its own of no more secure an antecedent status, and so on indefinitely, then we are entitled to—may rationally place trust in—the original presuppositions without specific evidence.

This proposal does not apply *directly* to Proper Hinges. Proper Hinges are not entitlements as characterised, since they fail to meet condition (ii). The problem with Proper Hinges is not that—like 'my visual system is functioning properly on this occasion'—to accept that there is an onus to justify them in any particular context in which they are presuppositional would be to launch an infinite regress of similar justificatory projects but rather that one has no idea how to justify them at all. Nevertheless the spirit of the foregoing ideas might foreseeably be extended to cover these special commitments. Proper Hinges are implicitly in play whenever our best justification for the truth of propositions of one kind—propositions of one distinctive type of subject matter: say, the material world, or mind, or the past—is viewed as consisting in the assembly of information about something else: sense-experience, behaviour, apparent memories. Wherever such is indeed the justificational architecture, it will be plausible that a Proper Hinge will form part of the informational setting we presuppose in order for the relevant justifications to go through. Very abstractly: suppose it granted that the best justification we can have for a certain kind of proposition—*P*-propositions—consists in information of another kind—*Q*-

propositions—such that no finite (consistent) set of *Q*-propositions entails any *P*-proposition. The use of *P*-propositions in accordance with this conception will then carry a double commitment: a commitment to there being true *P*-propositions—and hence truth-makers for them—at all, and a commitment to a reliable connection between the obtaining of such truth-makers and the truth of finite batches of appropriate *Q*-propositions. That is the broad shape of the commitment which surfaces in the specific instances:

that there is a material world, broadly in keeping with the way in which sense experience represents it;
 that other people have minds, whose states are broadly in keeping with the way they behave;
 that the world has an ancient history, broadly in keeping with presently available traces and apparent memories;
 that there are laws of nature, broadly manifest in finitely observable regularities.

Here, each first conjunct presents a Proper Hinge as originally conceived, while the second conjunct effects the connection necessary for the favoured kind of evidence to have the force which we customarily attach to it. In order to expunge all Proper Hinges from our thinking, we would accordingly have to do nothing less than so fashion our thinking that it *nowhere* traffics in propositions related as the *P*-propositions and *Q*-propositions in the schema. And that's just to say that *none* of the thoughts we think must be such that their truth-makers are beyond our direct cognition, so that we are forced to rely on finite and accessible putative *indicators* of their obtaining.

The prime casualty of such a way of thinking would be the thinker's conception of her own cognitive *locality*: the idea of a range of states of affairs and events existing beyond the bounds of her own direct awareness. Globally to avoid the kind of justificational architecture which invokes Proper Hinges, one would have to forgo all conception of oneself as having position in a world extending, perhaps infinitely, beyond one's cognitive horizon. In particular, it would be to surrender all conception of our own specific situation within a broader objective world extending *spatially and temporally* beyond us.

It is a crucial question whether there could be any coherent system of thought which functioned like that. All our actual thought and activity is organised under the aegis of a distinction between states of affairs accessible to us at our own cognitive station and others that lie beyond. There are issues, certainly, about what is properly allotted to the respective sides of this distinction—whether, for example, the former encompasses anything beyond our own episodic mental states, as Descartes implicitly thought. But whatever is allotted to the domain of the directly accessible, there are two vitally important categories of fact—those of general natural law and of the past—which must surely be consigned to what lies beyond. Since practical reasoning involves bringing information of both kinds to bear on hypothetical situations—of course this point requires detail which I will not here attempt to provide—it seems certain that any system of thought purified of all Proper Hinges could not be that of a rational agent. One's life as a practical reasoner depends upon trust in them. To avoid them is to avoid having a life.

All this, naturally, is merely suggestive. In particular, the notion of entitlement illustrated still awaits a fully argued generalisation to cover the case of Proper Hinges. There is also an issue about whether there is any such generalisation which affords everything we want without

the cost of being—as many would think—implausibly permissive (netting, for instance, the existence of God along with that of an extended past and the external world) or implausibly relativistic (leaving, for instance, nothing to choose between a normal acceptance of the existence of other minds and solipsism.) Those are questions for another occasion.

But let me conclude by summarising the provisional perspective reached by the present discussion. I suggest that the principal message of *On Certainty* is that scepticism embodies an insight which Moore missed: the insight that to be a rational agent, reflectively pursuing any form of cognitive enquiry, means placing trust in suppositions which—at least on the occasion—are not themselves the fruits of such enquiry and are therefore not known. When I go after warranted belief about accessible states of affairs in my own locality, the credibility of my results depends on presuppositions about my own proper functioning, and the suitability of the prevailing conditions, etc. When I go after warranted belief about states of affairs outside, the credibility of my results depends on presupposition of the augmented Proper Hinges which condition my conception of how the locally accessible may provide indications of what lies beyond. The official sceptical response to this reflection would be to give up on the distinction between warranted and unwarranted belief as a charade. The alternative ‘spin’ to be taken from *On Certainty* is that the concept of warranted belief only gets substance within a framework in which it is recognised that all rational thought and agency involves ineliminable elements of blind trust. Since rational thought and agency are not an optional aspect of our lives, we are entitled—save when there is specific evidence to the contrary—to make the presuppositions that need to be made in living out our conception of the kind of world we inhabit and the kinds of cognitive powers we possess.

To be entitled to accept a proposition in this way, of course, has no direct connection with the likelihood of its truth. We are rationally entitled to proceed on a basis of trust merely because (or when) there is no extant reason to believe it is misplaced and because, unless we do so, we cannot proceed at all. An epistemological standpoint which falls back on a conception of entitlement of this kind for the last word against scepticism needs its own version of (what is sometimes called) the Serenity Prayer¹³: in ordinary enquiry, we must hope to be granted the discipline to take responsibility for what we can be responsible, the trust to accept what we must merely presuppose, and the wisdom to know the difference.¹⁴

13. I had thought the prayer, or at least its sentiment, original to Augustine, but John Haldane advises me that it is modern, now usually attributed to a Dr. Reinhold Niebuhr, of the Union Theological Seminary, NYC, who reputedly composed it in 1932. The official version runs

God, grant me
the Serenity to accept the things I cannot change
the Courage to change the things I can
and the Wisdom to know the difference.

14. My thanks for comments and criticisms to participants at the Wittgenstein Symposium and to Annalisa Coliva for helpful advice on the final typescript. An earlier version of some of this material was presented at the conference on *Wittgenstein's Lasting Significance* held at Gregynog, mid-Wales in July 2001. The paper is an abridged version of my (2004b) and fuller discussions of some of the ideas may be found both there and in my (2004a). The research for the paper was completed during my tenure of a Leverhulme Research Professorship; I most gratefully acknowledge the support of the Leverhulme Trust.

References

- McFetridge, I.G. 1990 "Logical Necessity: Some issues", in his *Logical Necessity and Other Essays* (Aristotelian Society Series 11), London: Aristotelian Society, 135–154
- Moore, G.E. 1959 *Philosophical Papers*, London: Allen and Unwin.
- 1922 *Philosophical Studies*, London: Routledge.
- Wittgenstein, L. 1969 *On Certainty*, Oxford: Basil Blackwell.
- 1978 *Remarks on the Foundations of Mathematics* (third edition), Oxford: Basil Blackwell.
- Wright, C. 1980 *Wittgenstein on the Foundations of Mathematics*, Cambridge/MA: Harvard University Press.
- 1985 "Facts and Certainty", *Proceedings of the British Academy* 71, 429–472.
- 2004a "On Epistemic Entitlement", *Proceedings of the Aristotelian Society Supplementary Volume* (forthcoming).
- 2004b "Wittgensteinian Certainties", in D. McManus (ed.) *Wittgenstein and Scepticism*, London: Routledge (forthcoming).