Martin Kusch

When Paul Met Ludwig: Wittgensteinian Comments on Boghossian's Antirelativism

Abstract: This paper tries to make plausible the following claims: The paragraphs §608–612 of *On Certainty* do not speak in favour of what Boghossian construes as the Master Argument for Relativism; that *On Certainty* introduces various relativistic themes; and that Boghossian and Wittgenstein conceptualize epistemic systems in rather different ways that lead to very different views on three candidate cases for radical difference in epistemic systems.

Keywords: Wittgenstein, relativism, Paul Boghossian, On Certainty

1 Introduction

This paper will discuss, from a Wittgensteinian perspective, some key aspects of Paul Boghossian's influential anti-relativist arguments. My starting point is the observation that Boghossian sometimes presents Wittgenstein as a key influence behind much contemporary relativism, while on other occasions he borrows elements from Wittgenstein in order to construct antirelativist positions. Is Boghossian right to do so? And what would Wittgenstein make of Boghossian's arguments for and against relativism?

1.1 The Master Argument for Relativism (MAR)

Boghossian construes the opposition between epistemic absolutist and relativist as follows. The former affirms what the latter denies: that there are absolute epistemic facts. Both sides agree, however, that if there are absolute epistemic facts, then it is in principle possible to have justified beliefs about them. Of course, the relativist thinks it is not possible to have such justified beliefs about absolute facts. How can the relativist establish this view? Boghossian suggests the following five-step argument (MAR) (Boghossian 2006, Chapter VII):

Step 1: We encounter "genuine alternative epistemic systems".

Epistemic systems are systems of epistemic principles. A genuine alternative to our own system is one that differs from ours in at least one fundamental principle.

Step 2: When encountering such alternative, the onus is on us to justify our epistemic system.

According to the relativist, we are tacitly committed to such "Demand for Justification".

Step 3: In this task we have no resources but our own epistemic system.

Call this insight "Ethnocentric Justification": Epistemic justification must be based on one's own epistemic principles.

Step 4: But we are not allowed to use our own epistemic system for this task of justification.

According to the relativist, we should accept "No-Self-Certification": the justification of a given form of reasoning must not make use of this very form of reasoning.

2 *On Certainty* and Relativism of Distance

Boghossian sees *On Certainty* §608–12 as gesturing towards MAR (Boghossian 2006, 69, 78–79, 95). Before looking at §608–12 directly I want to briefly explain what I take to be an important relativistic strand of the book. This strand is its attempt catalogue our – primarily Wittgenstein's own – responses to people who (seem to) deny one of our, or his, certainties. The point of the exercise is to emphasise the variety of our responses to such denials. Some such responses are dismissive, some educational, some sceptical, some relativist. There are about thirty of such scenarios in *On Certainty*.

Here are some examples. When a friend denies a certainty then Wittgenstein is inclined to regard him as "demented" or "insane" (OC §71). Wittgenstein treats other adult members of his own culture similarly (OC §271, 257). Children receive a more charitable treatment. In their case Wittgenstein is willing to offer arguments, explanations, and education (OC §310, 322). Turning to the categories of strangers that are not members of our culture, Wittgenstein thinks that sometimes we are willing to dismiss them as ignorant. Thus the tribesmen who in 1950 insist that someone has been to the Moon – and who thereby deny one of our fundamental empirical-scientific beliefs – are "people who do not know a lot that we know" (OC §286). But other paragraphs suggest that this response is natural only as long as we treat the claim "someone has been to the moon" as a direct denial of one of our scientific certainties. Thus §92 considers a king who has been told since childhood that "the earth has only existed [...] since his own

birth." Wittgenstein likens the king's belief to magical beliefs about one's ability to make rain. This suggests to Elizabeth Anscombe that the king is best thought of as a religious leader like the Dalai Lama (see Anscombe 1976). Wittgenstein imagines George Edward Moore trying to convince the king that the earth has existed since long before our birth. And he goes on: "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." What is striking here is the absence of any "they are wrong and we know it" (OC §286). In a related passage (OC §238) Wittgenstein insists that sometimes, when someone contradicts "my fundamental attitudes" I can do no better than "put up with it". And in §108 Wittgenstein speaks of people who claim to have been to the moon: "We should feel ourselves intellectually very distant from them."

Having convinced himself that this is indeed the proper response to certain disagreements concerning magic and religion, Wittgenstein then draws an analogy between the disagreements between believers and nonbelievers on the one hand, and our response to past periods with their different conceptions of the reasonable and the unreasonable, on the other hand: "But what men consider reasonable or unreasonable alters. At certain periods men find reasonable what at other periods they found unreasonable. And vice versa." (OC §336) This suggests that Wittgenstein assumes that our response to disagreements over some other certainties too might be treated on the model of the religious certainties.

I propose calling the relativistic theme that emerges in these passages "relativism of distance"; a term coined by Bernard Williams in a different context (see Williams 1981). A relativism of distance has two key elements. On the one hand, we have a "confrontation" of epistemic or moral systems that is "notional" rather than "real". A confrontation is notional if going over to the other side is not a "real", a live option; it demands a conversion. On the other hand, "for a *reflective* person the question of appraisal does not genuinely arise ... in purely notional confrontation". Her terms of appraisal appear to her inappropriate or without traction regarding the beliefs and actions of members of the other culture.

Relativism of distance can be enriched with an idea central in the work of another relativist moral philosopher, David Wong. He suggests that a relativistic attitude is triggered by "moral ambivalence" (Wong 2006). This is an experience of an encounter in which "our sense of the unique rightness of our own judgment gets destabilized". We encounter someone too much of an intellectual peer to be dismissed as insane or foolish, and yet acting or judging in a way that makes us suspect or realize that our sense of right and wrong is not uniquely correct.

There are thus three features that set Wittgensteinian "relativism of distance" apart from other versions of relativism. First, it focuses on specific experiences triggering relativistic reactions. Second, it centers on conceptual difficulties of appraisal. And third, it has a "particularist" orientation: it can apply to much smaller units than whole cultures or epistemic or moral systems.

3 On Certainty §602–612

We can now return to the question how these paragraphs stand vis-à-vis relativism. They belong to a train of thought that begins in §602. §602 states the problem to be discussed: there is something about our trust in physics that seems to undermine its objective character. §603 points out that physical knowledge is *systematic*, and that my knowledge of it is merely *partial*, overwhelmingly *testimonial*, and largely based on *blind trust*. §604 reminds us of two things. First, the trust in physics is embedded and enforced by important social institutions like the law. Second, someone who is not a credentialed physicist is unable to challenge the results of physics. §605 expresses a worry relating to the idea that our reliance on physics is grounded in blind trust: what if the physicists' statements were "superstition"? Would we be able to detect this? §606 rejects this worry. Ordeal by fire was a bad epistemic tool, though people did not realize this at the time. This is no reason for suspecting that physical methods might likewise be bad. §607 lets a judge emphasize a point that Wittgenstein himself wants to insist on: that the blindness of the trust underlying physics does not make physical knowledge impossible.

§608 restates the concern: does the blind trust rob me of the rationale to rely on physics? And the reassuring answer is that we treat the propositions of physics as "good grounds" almost by definition. This thought is followed, in §609, by a question that structures the rest of the discussion: how do we who trust in physics react to people who put their trust in oracles instead? The initial reply is that we call "them" "primitive" and "wrong". These evaluations are forms of "combat" based on our language-game. In §610 Wittgenstein raises the question whether this combatting is right. Leaving this question open, he notes that our case for superiority is based on "slogans". The important implication is that we have got nothing better. §611 adds to this that the clash between the oracle-following tribe and us is a clash of two irreconcilable principles, and that invectives like "fool" or "heretic" are markers of such conflicts. It seems that instead of convincing the other side, all we can do is dismiss it. §612 confirms the suspicion of §611: some reason-giving is possible but in the end there is only combat, persuasion and conversion.

§602 to 612 do not argue that the oracle is as reliable as is ours physics. But nor do they seek to establish that we invariably fail in justifying our epistemic systems, and that hence there are no absolute epistemic facts. The ideas hinted at in these paragraphs part and parcel of an investigation into the foundation of the (ultimately blind) trust upon which science is based. That science is so based, is a shortcoming only in the eyes of someone who has mistaken excessively rationalist standards.

Moreover, one of the upshots of these paragraphs is that our aggression towards the oracle-users tells us something about the strength of our socially-sanctioned trust in our experts. And part of our aggression may spring from the fact that in the encounter with the oracle-users we might be realising the role of blind trust in our belief system for the first time. But that our belief system is based in blind trust, is not an argument for relativism – not even for a relativism of distance. On the contrary, Wittgenstein wants to remind us of how natural it is for us to reject those who deny our scientific certainties in a systematic way.

§602–612 thus are a sketch of an analysis of our natural antirelativism (in certain domains) and its social and social-psychological foundations. And the message is not what Boghossian formulates as MAR. Wittgenstein would not accept steps 2 and 4. He does not think that we have to defend our epistemic system when we encounter another; for him there is no such demand. There is only the natural attitude of dismissing challenges to our science. And concerning "No-Self-Certification" Wittgenstein would remark that we simply use our epistemic system when it comes to the purposes of combatting, persuading and converting.

And yet, while I deny that Wittgenstein offers §602–612 as a Master Argument for epistemic relativism, I still think that the epistemic relativist is able to use §602–612 in defence of a relativist position. Let me explain. Peter Strawson once suggested that "[a]ccording to Hume [...] sceptical doubts are [...] powerless against the force of nature, of our naturally implanted disposition to belief" (Strawson 1985, 19). Strawson went on to observe "a profound community" on this point between Wittgenstein and Hume. Michael Williams later objected that on this reading, Wittgenstein and Hume would "concede [...] the sceptic's theoretical invulnerability" (Williams 1988, 416). It may be impossible to live scepticism, but it may still be right.

The central issue before us is not scepticism, but relativism. We saw that §602–612 suggest that between us and a relativism about the results of current science stands our ultimately blind trust in our scientists. This trust makes it difficult for us to live such a relativism. This is analogous to Strawson's reading of Wittgenstein on scepticism. And now the relativist can argue in parallel with Michael Williams: it may well be true that we cannot live this kind of relativism, but

this consideration leaves the relativist's position theoretically invulnerable. Relativism about our currently best science is impossible to live – but it has not been defeated as a theoretical outlook of, say, the anthropologist or sociologist of knowledge. Once more, Wittgenstein does not reason in this way – but we could.

How does my interpretation of §602–612 relate to relativism of distance? It is a fact about us that we feel epistemic or moral ambivalence in some cases and not in others. We do not feel epistemic ambivalence about the best current physics when we meet the tribe who trusts oracles. But some of us feel such ambivalence when we encounter, say, the religious beliefs of intellectual peers.

4 Blind Entitlement

Boghossian does not only take Wittgenstein to gesture towards MAR in §608–612; he also holds that elsewhere in Wittgenstein's oeuvre we find an idea that blocks MAR from going through. This idea Boghossian calls "Blind Entitlement": "each thinker is entitled to use the epistemic system he finds himself with, without first having to supply an antecedent justification for the claim that it is the correct system" (Boghossian 2006, 99). The inspiration for this principle in §219 of the *Philosophical Investigations:* "When I obey a rule, I do not choose. I obey the rule blindly." (PI §219) Blind Entitlement disables MAR in cooperation with two other principles, "Coherence" and "Demand for Impressiveness":

> (Coherence) Any ES that fails constraints of coherence is incorrect.
> (Demand of Impressiveness) For an alternative ES to trigger Demand for Justification, its "*actual* achievements [...] have to be *impressive* enough to make us legitimately doubt the correctness of our own [epistemic system]." (Boghossian 2006, 101)

Coherence radically restricts the number of genuine alternatives to our epistemic system. Blind Entitlement together with Demand for Impressiveness dislodges the Demand for Justification. And Blind Entitlement contradicts No-Self-Certification.

I am not convinced that this is in the spirit of Wittgenstein's position. Note, first of all, that his remark about obeying a rule blindly is not a remark about an *entitlement*. It is an observation about what we do. Second, while *On Certainty* too frequently speaks about systems of beliefs, it does not couch our relationship to such systems in terms of entitlements. Instead Wittgenstein speaks of this relationship as "something animal" (OC §359) or "trust" (OC §509). Third, it seems to me that Wittgenstein would be likely to regard Blind Entitlement as no more

than a "slogan" that we use to sublimate our gut response. And fourth, Wittgenstein would also object to the all too narrow range of outcomes that Boghossian allows for the encounter between two epistemic systems. To wit, that either one of the two is judged superior to the other, or else that they are taken to equal, and equivalent to one another.

More generally, Wittgenstein would also object to the ways in which Boghossian renders the relativist and the anti-relativist positions. For Wittgenstein, the best way to make some forms of relativism plausible would not be an in-principle argument like MAR. A better route would be to focus on our responses to certain types of encounters. Perhaps we can capture the difference by distinguishing between "generalist" and "particularist" versions of relativism. The generalist wants an in-principle argument as to why a whole domain of judgments has to be understood in relativist terms. The particularist insists that we have relative intuitions about quite specific questions within domains. If the Wittgenstein of *On Certainty* is a relativist, he surely is a relativist of the latter sort.

5 Epistemic Systems

For Boghossian an epistemic system consists of epistemic principles. Some of these are fundamental, some are derived (Boghossian 2006, 67). "Observation" is fundamental: "For any observational proposition p, if it visually seems to S that p and circumstantial conditions D obtain, then S is prima facie justified in believing p." (Boghossian 2006, 64) The distinction allows Boghossian to specify a criterion for being a "genuine alternative to our epistemic system". The criterion is that the alternative must be different in *at least one* fundamental principle. Boghossian argues that a couple of often-cited examples of such alternatives – the Azande and Cardinal Bellarmine – do not in fact meet his criterion.

Wittgenstein too talks about epistemic systems of sorts (OC §105, 108, 144, 410, 411). Beliefs in our belief systems are more or less fundamental. The more fundamental they are, the less likely it is that they are wrong. The most fundamental beliefs are certainties. The key idea is that some "sentences (or beliefs) of the form of empirical judgments (or beliefs)" can in some contexts be as fundamental as are judgments or beliefs about the meanings of words, or mathematical beliefs. And not all beliefs about the meaning of words or mathematical propositions are as certain as are "sentences of the form of empirical judgments". Furthermore, there is structural reason why certainties cannot be proven true: "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 a position to take

the sight of my hand as evidence for it." (OC §250) Finally, Wittgensteinian epistemic systems are dynamic, they change over time (OC §96, 99). This dynamic aspect is missing in Boghossian's work. Note also that whereas Boghossian's principles are an analyst's idealizations, abstract, and separable from specific contents and contexts, Wittgenstein's certainties are actor's paradigms, concrete and inseparable from specific contents and contexts. Finally, other than Boghossian, Wittgenstein does not offer a criterion for what constitutes a genuine alternative epistemic system. We can see what difference these differences make when we turn to the examples discussed by Boghossian.

The first example is the epistemic system of Robert Bellarmine, Galileo's opponent, and defender of a geocentric universe. According to Boghossian, Bellarmine adhered to the following principle:

> (Revelation) "For certain propositions p, including propositions about the heavens, believing p is prima facie justified if p is the revealed word of God as claimed by the Bible." (Boghossian 2006, 69)

This interpretation can be supported by the fact that Bellarmine defended Ptolemy's system with passages from the *Bible:* "The words 'The sun rises and the sun sets, and hurries back to where it rises, etc.' were those of Solomon, who not only spoke by divine inspiration but was a man wise above all others" (Bellarmine 1615).

But did Bellarmine use an epistemic system that can be categorized as a genuine alternative to our own? For Boghossian this hinges on whether Bellarmine followed a fundamental epistemic principle that we do not recognize as binding. The most plausible candidate for such fundamental principle is Revelation. Boghossian is not convinced that Revelation qualifies. If Revelation were fundamental then it would trump Observation with respect to some statements about the heavens (e.g. Jupiter has moons) but not with respect to others (e.g. there are clouds in the sky). The problem is that the dividing line would not be epistemologically motivated; it would be arbitrary. And arbitrary distinctions make an ES incoherent. Ergo it is more charitable to assume that Revelation is derived; and that Bellarmine and us share the same epistemic system.

I am not convinced. It is not obvious that if Revelation were a fundamental principle for Bellarmine, he would then let Revelation trump Observation in an epistemically unprincipled way. On the one hand, Bellarmine believed that no "true demonstration" of the Copernican system had been presented; and that therefore doubts about its truth were justified. On the other hand, he also held that "in a case of doubt, one may not depart from the Scriptures as explained by the holy Fathers" (Bellarmine 1615). That is to say, the situations in which Rev-

elation was the dominant principle with respect to the heavens were restricted in a principled way. Revelation was to be relied upon when no true demonstration of a scientific theory was possible. We thus do not have to treat Revelation as a derived principle in order to save Bellarmine's epistemic rationality.

This is not to deny that the history of Bellarmine's adoption of Revelation involved other principles to do with sensory observation or testimony. But this need not conflict with its fundamental status. Here it helps to think of epistemic systems as dynamic, and hence in accordance with *On Certainty*. Initially Bellarmine may well have justified Revelation in terms of norms and standards that he shared with Galileo and with us. But he may then have gone further: he may have found further evidence for Revelation from reading the Bible. Maybe the Bible told him to take Revelation as fundamental. This evidence may have lead him to boost the standing of Revelation to a position as strong as any fundamental principle.

Remember also that for Bellarmine King Solomon "spoke by divine inspiration". So maybe Bellarmine accepted ...

> (Mystical Perception): If it seems to S that God is telling him that p, and circumstantial conditions D obtain, then S is *prima facie* justified in believing that God is telling him that p.

Trust in Mystical Perception may, or may not have been based on the Bible. Either way, it could well have been fundamental.

Boghossian's second example concerns exotic, real or imagined, tribes, like the oracle-using Azande or Wittgenstein's "odd woodsellers" that price piles of wood by the area covered, disregarding the height of the piles. Boghossian's central question is again whether we have here genuine alternative epistemic systems. His treatment of the Azande's oracle is swift. Even though the Azande have an epistemic principle that they do not share with us – "(Oracle) For certain propositions p, believing p is prima facie justified if a Poison Oracle says that p." (Boghossian 2006, 71) – this principle is not fundamental. If Oracle were fundamental then the Azande would let Observation be trumped in an arbitrary fashion (Boghossian 2006, 105). In the same context, Boghossian also addresses an old chestnut about the Azande's reasoning. Recall that the Azande accept a principle according to which if a father is/was a witch, then so are his sons. And yet, confronted with, say, Jones, whose father was a witch, the Azande are unwilling to draw the conclusion that Jones is a witch, too. Is this a sign that the Azande have a different logic? Do they reject Modus Ponens? Boghossian justifies a negative answer in the following way. Assume we translated some elements, E, of the Zande language as "if-then". And suppose further that on this translation the Azande would be committed to denying Modus Ponens. As Boghossian

has it, this would be very strong evidence that our translation of "E" as "if-then" had been incorrect. And he concludes that this demonstrates the difficulty of describing a fundamentally different logic, or a genuine alternative to our epistemic system. Allegedly Wittgenstein conceded this point when he admitted that the odd woodsellers "simply do not mean the same by 'a lot of wood' and 'a little wood' as we do [...]" (RFM §150): "[...] they may not be denying anything that we regard as obviously true and the attempt to describe a genuine alternative to our [ES] will have failed once again." (Boghossian 2006, 109)

What would Wittgenstein make of Boghossian's arguments? First of all, are the Azande arbitrary in letting Oracle trump Observation on some occasions but not on others? This is far from obvious. They consult their oracles primarily in those areas of life where it is hard to obtain hard and fast evidence: adultery and causes of illness, mishaps and death. Why is this not a plausible epistemic category? Turning to Boghossian's translation-theoretic argument against the possibility of a different logic, what if the best translation of the Azande's expression E were the *if-then* of "relevance" or "linear logic"? Or what if on our translation a tribe's logic were "paraconsistent" or "dialethist" or "defeasible"? Or what if the Azande restricted Modus Ponens to certain domains – on the basis of plausible epistemological considerations? Would all these not count as different logics, leading to different conclusions? It is true that in such cases E would not mean "if-then" in the sense of the material conditional in classical logic. But its meaning might still be "close enough" for us to see the similarities and to appreciate the differences.

Finally, consider the odd woodsellers. Is their system of measuring wood a genuine alternative to our own? Wittgenstein makes three observations on this imagined tribe. The first is that such tribe could easily be exploited by us. Consider two piles of wood, A and B, of identical area, but of different height: B is higher than A. Assume that the Azande possess B and we own A. We could then say: "Let's swap: I'll give you my Pile B for your Pile A." Second, Wittgenstein asks whether the odd woodsellers suffer from "logical madness". And third, Wittgenstein addresses the question whether the practice of the odd woodsellers is "pointless". Here are his replies: "Pointless"? Well, much is pointless in our culture, too. Think of coronations. Concerning logical madness he writes: "We might call this a kind of logical madness. But there is nothing wrong with giving wood away. So what is wrong with this? We might say, 'This is how they do it.'" (LFM 202) And thirdly, yes, the Azande are exploitable by us, but not by each other, provided they do not live by selling wood. And thus their practice may well be functional in their society. The upshot is that although their way of measuring the value of wood is very different from ours, theirs is not irrational. And thus Wittgenstein thinks that there is a perspective from which the odd woodsellers'

practice can be treated as equal to our own – each is functional given the social arrangements in the society.

Nevertheless, Boghossian's worry remains: do the Azande really draw conclusions that differ from ours? Or do they simply mean different things by "little wood", and "a lot of wood", and would we be in full agreement with them, once these differences on meaning were properly taken care of? In other words, is there any disagreement, or any sort of exclusiveness, between us and them? One response to this might be to say that the differences between us and the odd woodsellers must run much deeper than the simple distinction between two senses of "a lot of wood" and "a little of wood". A community whose thinking differs from our with respect to these terms is also likely to deviate from us in many other respects. We do not simply disagree over whether pile A is a little wood or lots of wood; rather, the consequences of their perspective include actions that are incompatible with the actions that are consequences of the our perspective. On this line of reasoning Wittgenstein would reply to Boghossian: 'you are right, the Odd Woodsellers do mean different things by "a lot of wood" and "a little wood", but this does not remove the tension between their judgments and actions and ours.'

Another response – less Wittgensteinian – might be to insist that Boghossian's distinguishing between two meanings of say "a lot of wood" does not get rid of the disagreement. Assume we say (I) '(Pile) A is a little wood' and the Azande say (II) 'A is a lot of wood.' That surely looks like a disagreement. But if we mean different things by 'little wood' and 'a lot of wood', the disagreement seems to disappear. (I) might then turn out to mean (I') "If one goes by area covered, A is a little wood", and (II) might become (II') "If one goes by the number of logs, A is a lot of wood." And yet, does this really remove the tension? Nelson Goodman (Goodman 1978, 114–115) suggests that the answer must be negative: in replacing (I) with (I') and (II) with (II') we have stripped away the speakers' commitments to claims about an amount of wood. And we have replaced these commitments with commitments about conditionals. To put the commitment back in, we have to add "and this is the correct way" to (I') and (II') respectively. And then disagreement is back.

6 Conclusions

I have tried to make plausible the following claims: §608–612 do not speak in favour of MAR; *On Certainty* introduces various relativistic themes: Relativism of Distance; antirelativism as the natural attitude in the case of certain challenges to current science; and Particularist Relativism. Boghossian and Wittgenstein

conceptualize epistemic systems in rather different ways. These differences find expression in their different views on three test cases. In these cases Wittgensteinian challenges to Boghossian seem promising.

References

Anscombe, Elizabeth (1976): "The Question of Linguistic Idealism". In: *Acta Philosophica Fennica* 27, 188–215.

Bellarmine, Robert (1615): "Letter to Foscari", http://www.historyguide.org/ earlymod/foscar ini.html, accessed February 18th, 2016.

Boghossian, Paul (2006): *Fear of Knowledge. Against Relativism and Constructivism*, Oxford: Oxford University Press.

Goodman, Nelson (1978): *Ways of Worldmaking*. Indianapolis: Hackett.

Strawson, Peter (1985): *Skepticism and Naturalism: Some Varieties; The Woodbridge Lectures 1983*. London: Methuen.

Williams, Bernard (1981): "The Truth in Relativism". In: Williams, Bernard: *Moral Luck*. Cambridge: Cambridge University Press, 132–143.

Williams, Michael (1988): "Epistemological Realism and the Basis of Scepticism". In: *Mind* 97, 415–439.

Wittgenstein, Ludwig (1953): *Philosophical Investigations*. Oxford: Blackwell. [PI]

Wittgenstein, Ludwig (1969): *On Certainty*. Oxford: Blackwell. [OC]

Wittgenstein, Ludwig (1976): *Wittgenstein's Lectures on the Foundations of Mathematics, Cambridge 1939*. Edited by Cora Diamond. Chicago: Chicago University Press. [LFM]

Wittgenstein, Ludwig (1978): *Remarks on the Foundations of Mathematics*. 3rd ed. Oxford: Blackwell. [RFM]

Wong, David (2006): *Natural Moralities*. Oxford: Oxford University Press.