Wittgenstein: Naturalism and Necessity
Dept. of philosophy, Univ. of Bergen
Wittgenstein Archives Bergen WAB
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Abstracts

- Juliet Floyd (Boston University)

Wittgenstein and Turing, 1939

Wittgenstein's 1939 Cambridge Lectures on the Foundations of Mathematics (LFM) provide an opportunity to develop and deepen our overall understanding of naturalism, foundations of mathematics, and what it is for philosophical accounts to be carried through with full rigor. If we broaden the usual context in which these lectures are regarded – a clash between Wittgenstein and Turing over the law of excluded middle, contradictions, ordinary language vs. mathematical logic -- and look at the real relationship between Wittgenstein and Turing, we see that LFM is part of a longer conversation. This lecture will argue against that idea that Wittgenstein and Turing were mutually "alien" to one another: on opposite sides of a dichotomy between methods of ordinary language and methods of formal logic. We will also reject the idea that in LFM and in Philosophical Investigations Wittgenstein is concerned to reject Turing's machine model as an analysis of logic, and that Turing himself was a computationalist or functionalist reductionist about the mind. A different form of "naturalism" emerges from the analysis.

- Annalisa Coliva (University of California Irvine)

Are there mathematical hinges?

In this paper I argue that, contrary to what several prominent scholars of On Certainty have argued, Wittgenstein did not maintain that simple mathematical propositions like "2x2=4" or "12x12=144", much like G. E. Moore's truisms, could be examples of hinge propositions. In particular, given his overall conception of mathematics, it was impossible for him to single out these more simple mathematical propositions from the rest of mathematical statements, to reserve only to them a normative function. I then maintain that these mathematical examples were introduced merely as objects of comparison to bring out some peculiar features of the only hinges he countenanced in On Certainty, which were all outside the realm of mathematics. I then close by gesturing at how the distinction between mathematical hinges and non-hinges could be exemplified and by exploring its consequences with respect to (Wittgenstein's) philosophy of mathematics.

- Bill Child (Oxford)

Anthropology and Naturalism in Wittgenstein's Philosophy of Mathematics

Wittgenstein says that 'mathematics is . . . an anthropological phenomenon' (RFM VII-32): that it is part of the natural history of human beings. But, he insists, mathematical propositions are not propositions of anthropology or natural history. How should we understand these claims?
Many interpreters maintain that Wittgenstein rejects both sides in the standard dialectic in philosophy of mathematics: he rejects constructivism, on the grounds that it undermines the hardness of the logical or mathematical 'must'; and he rejects platonism, on the grounds that

its supposed explanation of mathematical truth is empty – a philosophers' myth. But if Wittgenstein's philosophy really does leave everything in our common-sense understanding of mathematics in place, it is natural to wonder how, exactly, his position really differs from platonism. The paper explores that question.

- Severin Schroeder (Reading)

Convention, calculation, and empirical truth in Wittgenstein's philosophy of mathematics

Wittgenstein characterises mathematical propositions as akin to grammatical norms, which amounts to a kind of conventionalism. Yet his conventionalism is severely restricted by the need for mathematics to be applicable by creatures with certain interests in a certain environment. That is to say, for arithmetic equations to be viable they cannot just be made (i) true by convention; their applications have to be (ii) empirically true, too. Moreover, according to Wittgenstein, there is a third source of mathematical truth: mathematical propositions have to be (iii) true according to the rules of calculation or proof. I shall consider if and how these three sources of mathematical truth can be combined.

- Alexander George (Amherst College)

Grammar or Anthropology: Wittgenstein's "remarks on the natural history of man"

Ludwig Wittgenstein, summarizing his philosophical method, famously and puzzlingly wrote:

> What we are supplying are really remarks on the natural history of man: not curiosities however, but rather observations on facts which no-one has doubted, and which have only gone unremarked because they are always before our eyes.

This claim is puzzling: "remarks on the natural history of man" sound like empirical remarks, not like the upshot of the linguistic investigations – as he puts it, those into the "grammar" of our locutions – that dominate Wittgenstein's later philosophy. What does Wittgenstein think is the relation between these remarks and his investigations?

- Oskari Kuusela (East Anglia)

Wittgenstein's non-empiricist naturalism in logic

In his later philosophy of logic Wittgenstein develops a novel account of the non-empirical status of logical statements. This is a departure from his early account of logic, according to which logic abstracts away anything empirical, or specifically human. By contrast, his later account explains 1) how logic can take as its object of investigation contingent forms of language, while retaining its non-empirical character. An important part of this account is Wittgenstein's explanation of logical idealization, i.e. how to describe complex and vague uses of natural language in simple and exact terms. Further, 2) logical models in Wittgenstein's later sense can themselves be based on empirical natural-historical considerations, while still being clearly distinguished from empirical claims. This opens up new possibilities for the use of logical methods as instruments of philosophical clarification.

- João Esteves da Silva (Lisbon)

Not empiricism and yet realism in logic. Wittgenstein v. Maddy

In this talk I shall compare and contrast Penelope Maddy's naturalistic account of logical necessity as outlined in *The Logical Must* (2014) with Wittgenstein's approach to the subject,

both early and late. Starting with the *Tractatus*, about which I endorse a logically oriented reading, and then moving on to some of his later writings, I shall attempt to sketch a brief picture of Wittgenstein's continuous struggle against both metaphysical realism and conventionalism. In particular, I shall try to explain, contra Maddy, how the *Tractatus* already rules out the possibility of justificatory accounts of necessity and why his later naturalistic turn does not allow room for logic to become an empirical science. This is so, from a Wittgensteinian perspective, not because of any aprioristic or anti-scientific dogmas but for the reason that logical investigation is not concerned with the discovery of truths about reality but rather with the clarification of thought.

- Frederic Kettelhoit and Alois Pichler (Univ. of Bergen / WAB)

A new tool for studying Wittgenstein's *Remarks on the Foundations of Mathematics*

In our talk we will present a new tool for reading and studying the Remarks on the Foundations of Mathematics (RFM) edition. The tool permits to easily trace the published text of RFM back to its sources in the Nachlass and, moreover, to read the source in parallel with other Nachlass variants of it. The tool has been developed by Fredric Kettelhoit and builds on and reuses the transcriptions and metadata provided for the Wittgenstein Nachlass by the Wittgenstein Archives at the University of Bergen (WAB, http://wab.uib.no/). These metadata include today information about *what* of the *Nachlass* has been published *where* in Wittgenstein's "published works" (see A. Pichler's catalogue in M. Biggs & A. Pichler, *Wittgenstein: Two Source Catalogues and a Bibliography*. Catalogues of the Published Texts and of the Published Diagrams, each Related to its Sources, Bergen 1993).

- Giulia Corti (KCL)

Drawing the limits of thought: Necessary propositions in the Tractatus

I address the problem of drawing the limits of thought. Often, theories trying to do so seem self-contradictory. I take Wittgenstein's "Tractatus" as an example of the attempt of drawing such limits as limits per se, namely set by the essential form of what they limit. In the "Tractatus", the limits are expressed by necessary propositions, which, in virtue of assumptions regarding how representation works turn out to be nonsensical. I analyse and assess Wittgenstein's case: if he is right, the limits of thought cannot be properly drawn because to express them one needs to go beyond them.

- Ásgeir Berg Matthíasson (St Andrews)

Contradictions and falling bridges: What was Wittgenstein's reply to Turing?

In this paper, I offer a close reading of Wittgenstein's remarks on inconsistency, mostly as they appear in the *Lectures on the Foundations of Mathematics*. I focus especially on an objection to Wittgenstein's view given by Alan Turing, who attended the lectures, the so called "falling bridges"-objection. I argue that, given the picture of mathematics Wittgenstein is advancing in the lectures, inconsistency is not necessarily fatal to the practice in which it arises and does not invariably require a revision of that practice. This, however, does not entail that contradictions are always benign in Wittgenstein's view, as some have held.