

1077-AJ-1045      **Juliet Floyd\*** (jffloyd@bu.edu). *Turing and Wittgenstein*. Preliminary report.

On 30 July 1947 Wittgenstein penned a series of remarks that have become well-known to those interested in his writings on mathematics. It begins with the remark "Turing's 'machines': these machines are humans who calculate. And one might express what he says also in the form of games". Though most of the extant literature interprets the remark as a criticism of Turing's philosophy of mind (that is, a criticism of forms of computationalist or functionalist behaviorism, reductionism and/or mechanism often associated with Turing), its content applies directly to the foundations of mathematics. For immediately after mentioning Turing, Wittgenstein frames what he calls a "variant" of Cantor's diagonal proof. We present and assess Wittgenstein's variant, contending that it forms a distinctive form of proof, and an elaboration rather than a rejection of Turing or Cantor. (Received September 15, 2011)