Notre Dame Journal of Formal Logic
Volume 31, Number 4, Fall 1990

Review of Gödel's 'Collected Works, Volume II'

G. KREISEL

Preamble All prominent results of Gödel's writings in this volume and many of its asides have been gone over in the literature, for readers of differing background; cf. Note 1 below (from: **Notes: Mainly Beyond the Academic Pale**). As in the review of Volume I, the emphasis below comes from a broader view, which relates those writings to other traditions, but with a difference. The material in Volume I is squarely in one tradition, going back to Hilbert's *Foundations of Geometry*. (Through this work not only (young Gödel's kind of) mathematical logic, but generally the axiomatic method in its modern sense, was put on the map.) The same is true of Volume II up to p. 101 or, equivalently, of the writings from the first half of Gödel's life (till his mid thirties). But the later part, after p. 119, belongs to an older tradition, variously known as logic chopping or exact philosophy (in the academic sense of this word), which, in turn derives from the heroic perennials familiar from philosophy in its more popular sense.

With this contrast explicit in the writings themselves, they will be cited more often than those of Volume I in the earlier review.

Background: Hilbert's agenda at the turn of the century This is not to be confused with his later programme, in which so-called finitist parts of—what had come to be called—metamathematics were privileged (with the usual consequences of such practice). The often tedious literary forms of logic chopping in the foundations of mathematics were to be replaced by those of mathematical logic with emphasis on the idea(l)s of *consistency, completeness*, and *decidability*. These household words were applied by Hilbert to formal objects defined independently of any further interpretation. The scheme recalled—the best of—rational mechanics beginning in the 17th century, which both replaced logic chopping concerning matter and motion and gave scope to the armchair (applied) mathematician. Results in the literary forms of mathematical logic were expected to 'speak for themselves' too.

Gödel's contributions to this line of business remain (among) its most memorable successes.