Logic, Semantics, Metamathematics (papers from 1923 to 1938) by Alfred Tarski. Translated by J.H. Woodger. Oxford University Press, Oxford 1956. 471 pp. Toronto list price $9.00.

"What is truth?" asked Pilate, and Jesus refrained from answering. Not so Tarski. "The concept of truth in formalized languages", a widely quoted paper, forms chapter VIII of this book and occupies one quarter of its bulk. This volume is a collection of seventeen articles, all published originally before the second world war in other languages. They appear here for the first time in English, and have been revised to clarify and amplify their contents. Some of them had been joint publications with C. Kuratowski, A. Lindenbaum and J. Lukasiewicz. The present collection is dedicated to T. Kotarbinski, the author's teacher, and is pervaded by the spirit of the now famous Polish school of logic. The translation has been a labour of love; the translator dedicated five years of his life to this formidable task. Tarski's work in mathematics proper is not included here; the papers have been chosen for their concern with the foundations and methodology of mathematics. Most of them have to do with the establishment of a scientific semantics. Semantical concepts, such as "meaning", "definability" and "truth" are known to lead to paradoxes when applied to ordinary language. However, the author shows that it is possible to give rigorous, even purely grammatical definitions of these concepts when applied to a formal language, provided the metalanguage is equipped with "variables of a higher logical type" than the object language. It is impossible to give here an account of all the papers in the collection, or even to list their titles. Let it suffice to mention a few other tidbits that can be found among the 471 pages: a logical system in which the biconditional is the only primitive sign (but quantification over propositional variables is permitted); an axiomatic treatment of geometry based on solids instead of the usual points and lines; the use of quantifiers in defining projective sets; a formal language in which a certain universal proposition is demonstrably false, while all its particular instances are demonstrably true; topological spaces as realizations of the propositional calculus, both classical and intuitionistic. This volume is a welcome addition to the bookshelves of those interested in the borderline of mathematics and philosophy.

J. Lambek, McGill University