

REVIEWS

The Association for Symbolic Logic publishes analytical reviews of selected books and articles in the field of symbolic logic. The reviews were published in *The Journal of Symbolic Logic* from the founding of the JOURNAL in 1936 until the end of 1999. The Association moved the reviews to this BULLETIN, beginning in 2000.

The Reviews Section is edited by Alasdair Urquhart (Managing Editor), Steve Awodey, John Baldwin, Lev Beklemishev, Mirna Džamonja, David Evans, Erich Grädel, Denis Hirschfeldt, Roger Maddux, Grigori Mints, Luke Ong, Volker Peckhaus, and Sławomir Solecki. Authors and publishers are requested to send, for review, copies of books to *ASL*, Box 742, Vassar College, 124 Raymond Avenue, Poughkeepsie, NY 12604, USA.

In a review, a reference “JSL XLIII 148,” for example, refers either to the publication reviewed on page 148 of volume 43 of the JOURNAL, or to the review itself (which contains full bibliographical information for the reviewed publication). Analogously, a reference “BSL VII 376” refers to the review beginning on page 376 in volume 7 of this BULLETIN, or to the publication there reviewed. “JSL LV 347” refers to one of the reviews or one of the publications reviewed or listed on page 347 of volume 55 of the JOURNAL, with reliance on the context to show which one is meant. The reference “JSL LIII 318(3)” is to the third item on page 318 of volume 53 of the JOURNAL, that is, to van Heijenoort’s *Frege and vagueness*, and “JSL LX 684(8)” refers to the eighth item on page 684 of volume 60 of the JOURNAL, that is, to Tarski’s *Truth and proof*.

References such as 495 or 280I are to entries so numbered in *A bibliography of symbolic logic* (the JOURNAL, vol. 1, pp. 121–218).

SHAWN HEDMAN. *A first course in logic: an introduction to model theory, proof theory, computability, and complexity*. Oxford Texts in Logic 1. Oxford University Press, 2004, xx + 431 pp.

In spite of its title, this textbook covers a lot of ground, particularly in the area of model theory. It includes not just the usual introductory material in logic, but also a great deal that is usually covered in more advanced texts, such as the excellent and widely used book by Boolos and Jeffrey—now in a fourth edition thoroughly revised by John Burgess (BSL IX 520).

The first chapter is an efficient introduction to propositional logic, going as far as proofs of completeness and compactness. Unusual features here are, first, the inclusion of the resolution method and secondly, a proof that the satisfiability problem for Horn formulas is solvable in polynomial time. Completeness is proved by reduction to conjunctive normal form, together with a proof of completeness for the resolution rule. General compactness is proved by König’s Lemma.

Chapter 2 covers structures and the semantics of first order logic, with numerous useful examples, including relational databases. Embeddings and the method of diagrams are introduced. Chapter 3 covers proof theory from a somewhat unusual angle, since the viewpoint here is closer to that of automated theorem proving than to the conventional logical approaches. Skolem normal form, Herbrand universes, unification and resolution for first