

THE REVIEW OF SYMBOLIC LOGIC

Edited by

Andrew Arana, *Coordinating Editor*

Andrew Bacon

Walter Dean

Fernando Ferreira

Wesley Holliday

Juliette Kennedy

Robert van Rooij

Jamie Tappenden

Sean Walsh

Charlotte Werndl

VOLUME 11 • NUMBER 3 • SEPTEMBER 2018 • ISSN 1755-0203

Copyright © 2018 by the Association for Symbolic Logic. All rights reserved.
Reproduction by photostat, photo-print, microfilm, or like process by permission only.



PUBLISHED QUARTERLY BY THE ASSOCIATION FOR SYMBOLIC LOGIC, INC.
WITH SUPPORT FROM INSTITUTIONAL MEMBERS.

THE REVIEW OF SYMBOLIC LOGIC

Coordinating Editor

Andrew Arana

Department of Philosophy, University of Paris 1 Panthéon-Sorbonne

Editors

Andrew Bacon

*Department of Philosophy
University of Southern California*

Walter Dean

*Department of Philosophy
University of Warwick*

Fernando Ferreira

*Department of Mathematics
University of Lisbon*

Wesley Holliday

*Department of Philosophy
University of California, Berkeley*

Juliette Kennedy

*Department of Mathematics
and Statistics
University of Helsinki*

Robert van Rooij

*Department of Philosophy and
Institute for Logic
University of Amsterdam*

Jamie Tappenden

*Department of Philosophy
University of Michigan*

Sean Walsh

*Department of Logic and
Philosophy of Science
University of California, Irvine*

Charlotte Werndl

*Department of Philosophy
University of Salzburg*

Advisory Board

Maria Aloni

*Department of Philosophy and Institute
for Logic, Language and Computation
University of Amsterdam*

Roy Cook

*Department of Philosophy and Minnesota
Center for Philosophy of Science
University of Minnesota*

J. Michael Dunn

*Departments of Computer Science
and Philosophy
Indiana University*

Richard Kimberly Heck

*Department of Philosophy
Brown University*

Geoffrey Hellman

*Department of Philosophy
University of Minnesota*

Elaine Landry

*Department of Philosophy
University of California, Davis*

Bernard Linsky

*Department of Philosophy
University of Alberta*

Penelope Maddy

*Department of Logic and Philosophy
of Science
University of California, Irvine*

Edwin Mares

*School of History, Philosophy, Political
Science & International Relations
Victoria University of Wellington*

Rohit Parikh

*Department of Computer
and Information Science Brooklyn College,
City University of New York*

Greg Restall

*Department of Philosophy
University of Melbourne*

Stewart Shapiro

*Department of Philosophy
Ohio State University*

Gila Sher

*Department of Philosophy
University of California, San Diego*

Achille C. Varzi

*Department of Philosophy
Columbia University*

Rineke Verbrugge

*Institute of Artificial Intelligence
University of Groningen*

TABLE OF CONTENTS

Pure Logic of Iterated Full Ground JON ERLING LITLAND	411
Stable Modal Logics GURAM BEZHANISHVILI, NICK BEZHANISHVILI AND JULIA ILIN	436
Logics for Propositional Determinacy and Independence VALENTIN GORANKO AND ANTTI KUUSISTO	470
Completeness of Second-Order Propositional S4 and H in Topological Semantics PHILIP KREMER	507
Triangulating Non-Archimedean Probability HAZEL BRICKHILL AND LEON HORSTEN	519
The Concept <i>Horse</i> is a Concept ANSTEN KLEV	547
Reference in Arithmetic LAVINIA PICOLLO	573
Another Arithmetic of the Even and the Odd CELIA SCHACHT	604

Subscription Information: *Review of Symbolic Logic* (ISSN 1755-0203) is published quarterly by Cambridge University Press for the Association for Symbolic Logic. Annual subscription rates for Volume 11 (2018): Institutional subscription rates, print and online: US \$1107.00 in the USA, Canada, and Mexico; UK £696.00 + VAT elsewhere. Institutional subscription rates, online only: US \$950.00 in the USA, Canada, and Mexico; UK £598.00 + VAT elsewhere. Institutional subscription rates, print only: US \$1077.00 in the USA, Canada, and Mexico; UK £671.00 + VAT elsewhere. Individual subscription rates, online only: US \$228.00 in the USA, Canada, and Mexico; UK £142.00 + VAT elsewhere. Individual subscription rates, print only: US \$257.00 in the USA, Canada, and Mexico; UK £142.00 + VAT elsewhere. Institutional subscription correspondence should be sent to: Cambridge University Press, One Liberty Plaza, New York, NY 10006, USA, for customers in the USA, Canada, or Mexico. Customers elsewhere should contact: Cambridge University Press, The Edinburgh Building, Shaftesbury Road, Cambridge CB2 8RU, UK.

Association for Symbolic Logic. Individual Members of the Association for Symbolic Logic receive a print subscription to *The Review of Symbolic Logic* as a benefit of membership. Requests for information, applications for membership, orders for back volumes, business correspondence, and notices and announcements for publication in the *The Bulletin of Symbolic Logic* should be sent to the Secretary-Treasurer of the Association: **ASL, Department of Mathematics, University of Connecticut, 341 Mansfield Road, U-1009, Storrs, CT 06269-1009, USA.** The email address of the Association's business office is asl@uconn.edu. The ASL website is located at <http://www.aslonline.org>. Links from that site provide further information on the *Review* and on submitting papers for publication.

Coordinating Editor: Andrew Arana, University Paris 1 Panthéon-Sorbonne, UFR 10 Philosophy, Institut d'histoire et de philosophie des sciences et des techniques (IHPST), 13 rue de Four, 75006 Paris, France. Email: andrew.arana@univ-paris1.fr.

Copyright: All rights reserved. No part of this publication may be reproduced, in any form or by any means, electronic, photocopy, or otherwise, without permission in writing from Cambridge University Press. Photocopying information for users in the U.S.A.: Copying for internal or personal use beyond that permitted by Sec. 107 or 108 of the U.S. Copyright Law is authorized for users duly registered with the Copyright Clearance Center (CCC) Transaction Reporting Service, provided that the appropriate remittance per article is paid directly to CCC, 222 Rosewood Drive, Danvers, MA 01923, USA. Specific written permission must be obtained for all other copying. General enquiries from the USA, Mexico, and Canada should be addressed to the New York office of Cambridge University Press <http://www.cambridge.org/us/information/rights/contacts/newyork.htm>; general enquiries from elsewhere should be addressed to the Cambridge office <http://www.cambridge.org/uk/information/rights/contacts/cambridge.htm>; permission enquiries from Australia and New Zealand should be addressed to the Melbourne office http://www.cambridge.org/aus/information/contacts_melbourne.htm; enquiries regarding Spanish-language translation rights (only) should be addressed to the Madrid office <http://www.cambridge.org/uk/information/rights/contacts/madrid.htm>

Copyright © Association for Symbolic Logic, 2018