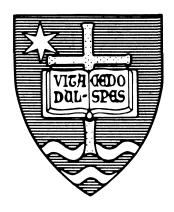
Notre Dame JOURNAL OF FORMAL LOGIC



VOLUME 30, NUMBER 1 WINTER 1989

PUBLISHED QUARTERLY BY THE UNIVERSITY OF NOTRE DAME. NOTRE DAME. INDIANA

NOTRE DAME JOURNAL OF FORMAL LOGIC

Editors:
Michael Detlefsen
John P. Burgess
Mark E. Nadel
Anand Pillay
William W. Tait

Business Manager:
Jan Houseman
Copy Editor:
Jon Beane

VOLUME 30, NUMBER 1, WINTER 1989

CONTENTS

More about thoughts. By Michael Dummett	1
Notes on modal definability. By Johan van Benthem	20
Multiset theory. By Wayne D. Blizard	36
A constructivism based on classical truth. By Pierangelo Miglioli, Ugo Moscato, Mario Ornaghi, and Gabriele Usberti	67
The theory of descriptions revisited. By Alberto Peruzzi	91
"Pathologies" in two syntactic categories of partial maps. By Franco Montagna	105
On the structure of De Morgan monoids with corollaries on relevant logic and theories. By John K. Slaney	117
Some modal logics based on a three-valued logic. By Osamu Morikawa	130
The elementary theory of the natural lattice is finitely axiomatizable. By Patrick Cegielski	138
Errata.	151

Notre Dame Journal of Formal Logic is published quarterly by the University of Notre Dame in the Winter, Spring, Summer, and Fall of each year. The Journal is composed by Beljan, Ltd., Dexter, Michigan and printed by Cushing-Malloy, Inc., Ann Arbor, Michigan. Second-class postage paid at Notre Dame, Indiana 46556.

Subscriptions are \$40.00 per year for institutions and \$20.00 for individuals. Back volumes are \$20.00 each for Volumes 1-10 and \$35.00 each for Volumes 11-29. Orders for subscriptions and back volumes (accompanied by payment) and changes of address should be sent to the *Business Manager*, P.O. Box 5, Notre Dame, Indiana 46556, U.S.A.

Copyright © 1989 by the University of Notre Dame. All rights reserved.

Coden: NDJFAM.

Notre Dame Journal of Formal Logic (ISSN 0029-4527)