FORMAL ONTOLOGY

Nijhoff International Philosophy Series

VOLUME 53

Formal Ontology

edited by

Roberto Poli
Department of Sociology and Social Research,
Trento, Italy

and

Peter Simons
Department of Philosophy,
Leeds, United Kingdom

Printed on acid-free paper

TABLE OF CONTENTS

FOREWORD

The idea of a formal ontology arose around the turn of the present century in the work of Edmund Husserl. It coincides in many respects with what is nowadays sometimes called 'analytic metaphysics' or with attempts to use formal methods to solve classical philosophical problems relating to the notions of being, object, state of affairs, existence, property, relation, universal, particular, substance, accident, part, boundary, measure, causality, and so on. Formal ontology thus includes several sub-disciplines, of which the most developed is the theory of part and whole, as sketched by Husserl in the third of his *Logical Investigations* and later worked out as a formal theory by Leśniewski. Formal-ontological ideas are present also in much contemporary work on naïve physics and in the formal theories of the common-sense world canvassed by workers in the field of artificial intelligence research.

The idea of a formal ontology is placed in a network of conceptual oppositions: it admits of different senses according to which of its two constituent elements is given priority. If the emphasis is placed on 'ontology' then the principal distinction is between 'formal' and 'material' (that is between 'formal ontology' and 'material ontology'); if instead the emphasis falls on 'formal', the contrast is between 'ontology' and 'logic' ('formal ontology' vs. 'formal logic'). This situation raises some important questions: When one speaks of 'ontology', how can its formal aspects be distinguished from its material ones? When we talk about the 'formal', how can we distinguish between logic and ontology?

The papers collected in this volume present a wide range of proposals about many aspects of formal ontology. The notions of being and object are analyzed by Poli, Cocchiarella, and Perzanowski; the notion of existence is considered by Sommers and Lambert; state of affairs, facts and situations are discussed by Sommers, Armstrong and Omyła; predicates are analyzed by Lambert and Cocchiarella; the difference between formal and material ontology is mainly considered by Albertazzi and by Smith and Petitot; these latter consider also naïve physics; the concept of part is discussed by Simons and Dement; the concept of measure by Johansson. But many other aspects are also considered and discussed. As a collection the papers indicate the scope, liveliness, and applicability of formal ontology.

The first idea for this volume arose out of the *International Summer School in Philosophy and Artificial Intelligence* on 'Formal Ontology', organized in Bolzano (Italy), 1-5 July 1991, by the Central European Institute of Culture. Our thanks go to the President of the Institute, Professor Claudio Nolet, for his constant and valuable support.

The Editors