From the Logical Point of View

Editor in chief
Antonín Kosík Prague

Executive editorial board
Petr Kolář Prague
Ondra Majer Prague
Vladimir Svoboda Prague

Editorial board
Karel Berka Prague
Pavel Cmorej Bratislava
Time Crane London
Walther von Hahn Hamburg
Eckehart Köhler Wien
Pavel Materna Prague
Ilkka Niiniluoto Helsinki
V. A. Smirnov Moscow
Petr Štěpánek Prague
Pavel Tichý Dunedin
Max Urchs Konstanz

CONTENTS

Pavel Tichý
Sinn and Bedeutung Reconsidered ....................................... 1

Tim Crane
Names, Sense & Kripke’s Puzzle ........................................... 11

Petr Kolář
A Plea for Facts .............................................................. 27

Graham Oddie
The Possibility & Value of Possibilities for Value ................... 46

Jaroslav Peregrín
Meaning, Truth & Models .................................................. 67

Pavel Materna
Meanings are Concepts ...................................................... 76

Karel Berka
Frege Linguistic Doctrines & Natural Language ..................... 90

Discussion ................................................................. 99

Book Reviews ............................................................. 102

Subscription price (incl. postage) per volume of 3 issues is 59 US $, per issue 30 US $, back issue 40 US $. An additional fee 3 US $ will be charged in the case of air mail for overseas. The right for discount is reserved. This offer is valid for Poland, Russia, Ukraine and so on. Orders (accompanied by payment) should be sent to: From the Logical Point of View, Dept. of Logic - Institute of Philosophy of CAS, Jiřská 1, 110 00 Praha 1, ČSR, fax: 02/2357859, E-mail: FIL45 AT CSPGCS11, bank account: 1175057038/0800

© 1992 Institute of Philosophy, Czech Academy of Sciences, Prague

Graphic Design © 1992 Pavel Šváb, Prague

ISSN 1210 - 2261

As it was already pointed out by many researchers, the problem of truth of future contingents, as raised by Aristotle in the ninth chapter of his treatise “De Interpretatione” has engendered a large number of scientific work and discussions. Nevertheless, the book under review is the first monograph in Russian dealing in a comprehensive and detailed manner with a complex of problems related to this subject. The author, a specialist in many-valued and temporal logics, aimed at analyzing and summarizing the numerous approaches concerning interrelations between Truth, Time and Necessity which are available in logical literature. He treated this theme quite successful and on a high professional level, using a large number of sources. (The bibliography contains 311 items.) Thus, the monograph is in the first line a historico-logical one. (Perhaps, a more adequate subtitle would be “A historico-logical analysis” rather than “A logical analysis”.) The book does not present any new solutions of the problems. However, this does not mean that the author limits himself to a mere enumeration of the various points of view, concealing his own standpoint. In the book all of these positions are subject to a careful examination. The authors view finds expression through the support for some of them as well as the rejection of others.

The book is divided into three chapters. Chapter One presents the main content of “De Interpretatione”. Furthermore, it contains a review of the discussion on the problems raised by Aristotle. As it is commonly known, the following logical principles form the basis of the problem of future contingents: the principle of bivalence $T(p) \lor F(p)$ and the principle of excluded middle (which has both a semantical and a object-linguistical formulation, i.e. $T(p) \lor T(\neg p)$ and $p \lor \neg p$, respectively. According to many workers in the field these principle are equivalent. In order to prove that equivalence, Tarski’s scheme $T(p) \equiv T\neg p$. Contrary to that, A. Karpenko stringently substantiates that neither (1) and (2), nor (1) and (3) are equivalent. He demonstrates that a circulus in demonstrando takes place, since the principle $F(p) \equiv T\neg p$ presupposes both (1) and (2). Thus, discussing the problem of future contingents, it is necessary to differentiate strictly between the principle of bivalence and that of excluded middle. In contemporary discussions on “De Interpretatione” A. Karpenko emphasizes the following stages: I. From the paper of J. Lukasiewicz “Philosophical remarks on many-valued systems of propositional logic” (1930) till G. E. M. Anscombe’s paper “Aristotle and sea-battle” (1956); II. From then till 1963; III. From 1963 (the works of Ackrill, Rescher, and Hintikka) up to now.

The main problems discussed by A. Karpenko are the following:

- The problem of interpretation of Aristotle’s treatise itself. There is the so-called traditional (or standard) interpretation, and the medieval (or non-standard) one. (A. Karpenko supports the traditional interpretation.)
- The compatibility of both the bivalence and the excluded middle principle with the refutation of logical fatalism.
- The reality of the future in comparison with the past and the present.
- The distinction between various kinds of necessity, interrelations between the Truth and the Necessary.
- The logic of propositions about future contingents;
- A number of further problems.

A. Karpenko considers and analyzes different approaches to solve these problems. Chapter Two, called “Fatalism”, is devoted to logical and theological fatalism. A. Karpenko claims that the matter of future contingents provoked a
widespread discussion because of its close connectedness with the problems of free will and fatalism. According to logical fatalism one can prove by laws of logic that everything in the world happens necessarily. A. Karpenko notes that there are two ways to refute logical fatalism: either to reject bivalence and excluded middle, or else the principle $\neg \neg p \vdash p$ (if $p$ is true, then it is necessary). Theological fatalism, on the other hand, claims that the omniscience of God implies the necessity of all what happens. A. Karpenko retracts the relation between both kinds of fatalism and analyzes attempts how to refute it. Furthermore, the author tries to connect logical fatalism with actual social problems, reaching that way a "logical-philosophical understanding of totalitarianism". This attempt, however, should not be evaluated as successful. A handful trite sentences on "totalitarian thought", taken from J. Orwell's novels, cannot serve as "the conception that explains totalitarianism". On may doubt as well, whether the author is right in claiming the postulates of logical fatalism to be conducive to the formation of an extremely totalitarian society. The most important chapter of the book is the third one. It deals with various refutations of fatalism by means of logic. The author considers J. Lukasiewicz's three-valued logic, as well as applications of modal and temporal logics to the analysis of fatalism (A. Prior's temporal logic, chrono-structures with branching futures, modal tense operators). To sum up, the authors compiles ten approaches to the solution of the problem of truth for future contingents. In his opinion, the most interesting proposition is the idea of structuralized truth-values (its origin is due to A. Prior). Although it is not quite clear what does the author mean to be the essence of this approach and how it could be helpful in solving the problem. A. Karpenko is somewhat short on this topic and limits himself to the vague remark that "properties of being are laid somehow on the truth-values". Furthermore, the autor constructs a few algebraic structures in order to realize this idea on a formal level. A. Karpenko holds that the concept "permits us to look in an absolutely new fashion at the status of logic itself". However, he does not explain any details of this new look. As a whole the book is an interesting and doubtlessly useful reading both for specialists in many-valued and temporal logic and for a larger circle of readers.

Yaroslav V. Shramko
Pedagogical Institute, Krivoi Rog, The Ukraine