

Jan Wolenski

Essays on Logic and its Applications in Philosophy.

Frankfurt a.M. et al.: Peter Lang 2011.

358 pages

\$88.95 (cloth ISBN 978-3-631-60666-7)

Essays on Logic and its Applications in Philosophy collects twenty-seven essays by Jan Wolenski, written between 2003 and 2010. Wolenski is and has been considered by many as a spokesperson for East European logicians and philosophers. Wolenski himself has often assumed the role of setting out and defending the views of Polish logicians and philosophers. So the reader finds in this collection references to Polish authors seldom heard of and reflections on the Polish language as used by them. Tarski's views (mostly on semantics) provide one area which the essays cover. Most of the other essays deal either with Wolenski's thesis of the universality of First Order Logic (FOL) or his employment of squares of opposition in outlining conceptual relations. Unfortunately, the essays are simply ordered chronologically, with some repetition between them.

What will deter most readers from reading more than a bit of this book is the poor editing. The book not only contains the unavoidable typos in a book with many symbols: it also misses references in the bibliography (e.g., 214) and abbreviations supposedly referring to formulas which, however, have never been introduced (e.g., 28, 48). Most of all, the English is a mess. This is not just a matter of idiosyncrasies occurring (using 'it' and 'this' interchangeably, for instance): often articles and verbs are missing. Mistakes in English spelling, grammar, and syntax are even introduced into the quotes given. Aristotle, for instance, is quoted as follows: 'Falsehood is saying of that which is that it is, or that what which is not, that it is not' (163). In the case of Aristotle, readers will at least likely know the proper wording; in the case of contemporary philosophers of the likes of Hintikka, the quotes will have to be checked by the reader.

One main topic Wolenski addresses is the question of whether FOL is *the* logic, i.e., whether it is universal. There have been debates since the advance of non-standard logics about whether these are proper logics or whether they can be subsumed within FOL, given additional constants or explicitly mentioned conditions that restrict the usual FOL-theorems. One may try to build a case for the universality of FOL based on its widespread use as a meta-language, augmented by some set theory, with respect to most logics. But not all meta-languages are first order – for instance, the crucial concept of a *finite* deduction can only be defined in Second Order Logic (SOL). Especially within the field of Relevant and Paraconsistent Logics, people have advanced other logics with the claim that they are universal. Some paraconsistent and some intuitionistic logicians employ paraconsistent or intuitionistic meta-languages. There have been world congresses on 'universal logic'.

Surprisingly, none of this plays any sort of role in Wolenski's argument. Notwithstanding his claim of universality for FOL, Wolenski uses Second Order Logic, Deontic Logic, and Fuzzy Logic in some of his essays. What Wolenski seems to understand by 'the universality of FOL' comprises first that its theorems are implied by all theories – *given* they are formalized in FOL! –

and second, that some of its nice qualities (such as compactness and deductive completeness) qualify it as the logic of humans as finite reasoners. These are weak reasons, however: adequacy (as put forth against SOL) is not only a matter of completeness but also of expressive power, and FOL cannot express crucial logical concepts which SOL can express (as Wolenski sometimes [76, 245] recognizes). Compactness, meanwhile, has to be confronted with the learnability arguments Dummett developed to recommend intuitionistic logic. The claim that FOL-theorems are implied by all theories once we have formalized them in FOL is almost vacuous in the debate, as that very formalization is the issue of contention. So Wolenski's debates with critics of FOL are framed to their disadvantage. For instance, Wolenski tries to use Gödel's First Incompleteness Theorem as an argument against intuitionism, but he neglects Dummett's interpretation of Gödel's Theorem (as showing that the class of intuitively acceptable proofs [in intuitionism] is an indefinitely extendable one) in favor of the assumption that constructive proofs are to be understood as formalized within Peano arithmetic in FOL. Although Wolenski in some of the papers applies FOL to shed light on a diversity of philosophical issues (ranging from semantics to ethics) his case for the universality of FOL stays unconvincing. At points (e.g., at 77) he leaves us to choose which logic we prefer.

A second group of essays deals with setting out and defending Tarski's definition of truth and logical consequence. Wolenski deals with the topic of truth-bearers, defending sentences as truth-bearers. One essay covers the status of (T)-equivalences (arguing that they 'are stronger than material equivalences' and 'weaker than tautologies' [240]). Wolenski comes up with a supposed *reductio* of the claim that (T)-equivalences are analytic (234–236); but the argument presupposes that one can push the analyticity claim into the object-language and that derivability distributes over equivalences, which need not hold in non-standard logics. Wolenski also comes up with a (new) paradox directed at theories like verificationism, which pose conditions on a sentence being meaningful (318); but the argument assumes that a sentence which is meaningful and wrongly says of itself that it isn't thereby (i.e., by *being* false) *says* that it is false. He attempts to defend Tarski's originality against the claim that Gödel anticipated Tarski's Theorem. These papers are more convincing, although the misrepresentation of opponents even includes making Davidson into a verificationist!

The third group of essays employs several versions of (extended) squares of oppositions to clarify a range of philosophically interesting concepts and to show the logical interrelationships between even ethical and religious theses. These essays may be worth reading for those working in the rather recently expanding field of investigating squares of opposition and their employment (as witnessed by at least two world congresses on these issues).

Wolenski admits that logic alone does not suffice to solve philosophical problems, as their treatment also involves their interpretation and formalization into logic (59–60). This is certainly true: mere formalization can turn out almost vacuous, and often it papers over shallow arguments. This applies to some of Wolenski's formalizations (e.g., on the relation of psychology to meta-logic). Wolenski's claim in this connection that we have to admit the role of interpretation awaits further elaboration of his concept of 'hermeneutics' (e.g., 321–323).

All in all, Wolenski would have done better presenting three books: one on each of the main areas, and each properly edited. *Essays on Logic and its Applications in Philosophy* may be

an inspiring, sometimes trying, read for logicians interested in squares of oppositions.

Manuel Bremer
Universität Düsseldorf