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Douglas Patterson. *Alfred Tarski: Philosophy of Language and Logic*. Palgrave Macmillan, Basingstoke, Hampshire, England, United Kingdom, 2012. ISBN 978-0-199-29630-9

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Review: Alfred Tarski, Philosophy of Language and Logic by Douglas Patterson

Roman Murawski

The book under review has been published in the series “History of Analytic Philosophy.” The aim of the series is, as the editor Michael Beaney explains in the foreword, “to create a venue for work on the history of analytic philosophy, consolidating the area as a major field of philosophy and promoting further research and debate” (p. viii). The history of analytic philosophy is understood here broadly—it covers the period from the last three decades of the nineteenth century (works of Frege, Russell, Moore and Wittgenstein) to the start of the twenty-first century.

The starting point of Patterson’s considerations in the book under review is the distinction of expressive and representational semantics. Language stands between mind and world. So one can think of it either in terms of its relation to the mind or in terms of its relation to the world. Consequently one may conceive of meaning in terms of the expression of thoughts or in terms of the representation of things. These approaches are called, respectively, expressive and representational semantics. In the first the notions of assertion and justification have primacy whereas in the second the notions of reference and truth are considered more important. The former is connected with the proof-theoretic conception of logic, while the latter is associated with the model-theoretic conception.

The book examines the development of truth-conditional, representational semantics by Tarski from the late 1920s until the mid-1930s. The author’s goal is to explain where Tarski’s views came

from, not to defend them. Since Tarski was rather reticent in expressing his philosophical views and commitments, the book is, as Patterson says in the Introduction, “something of an exercise in philosophical detective work” (p. 10). The method the author followed was: “to figure out what the views of his [Tarski’s] teachers were and then find sufficient signs of those views in what Tarski did say that we can feel comfortable filling in the gaps with those views” (p. 10).

Two famous papers by Tarski are important from the point of view of the subject of the book: “The Concept of Truth in Formalized languages” (first published in Polish in 1933 and then in German in 1935) and “On the Concept of Logical Consequence” (published in both Polish and German in 1936). In the first paper a definition of truth for formal languages in terms of satisfaction was given (the recursive structure of a formal language was used here). One finds there also a famous T-scheme and a proposal to solve the Liar paradox by distinguishing the language and its metalanguage, as well as the theorem on the undefinability of truth for a language in itself. In the second paper Tarski gave a semantic definition of logical consequence by applying the ideas of the first paper.

Patterson shows in the book that Tarski’s views were more complex than they are usually taken to be. He argues that both indicated papers made major contributions to representative semantics and model theory. Simultaneously he shows, by careful examination of Tarski’s works, that Tarski’s results were in fact motivated by the expressive conception of meaning. He inherited this view from his teacher Stanisław Leśniewski, and Tarski referred to it as “intuitionistic formalism.” Intuitionistic formalism, or intuitive formalism, as it is sometimes called, was the conviction that logical formulas should be meaningful not only from the syntactic but also from the intuitive point of view. Thus Leśniewski claimed that every language system says something about something, that statements of every formal theory are endowed with meaning. He rejected the interpretation of such theories as games using symbols

void of meaning.

Just this doctrine is the subject of the first chapter of the book. Patterson tries to examine what intuitionistic formalism was, where it came from, and how Tarski conceived of himself as contributing to it. One finds here also information on Leśniewski's early and later work, as well as the work of Kotarbiński. Chapter 2 is about Tarski as an intuitionistic formalist, in particular about his attempts to express discourse about a deductive theory in a deductive theory itself (this was probably inspired by Leśniewski's steps towards formalized syntax). This resulted in several papers on axioms for the consequence relation, each analyzed in Patterson's book. Next Tarski's investigations concerning definability and the completeness of concepts are considered, in particular the paper "Some Methodological Investigations on the Definability of Concepts."

Chapter 3, "Semantics," describes philosophical resistance towards semantic notions (e.g., the Vienna Circle) as well as the opposite trend, the developments in mathematical logic that involved the treatment of semantic concepts (e.g., algebraic logicians, in particular Pierce, Skolem, American Postulate Theorists). Patterson also analyzes Tarski's "On Definable Sets of Real Numbers" vs. intuitionistic formalism.

Chapter 4 is devoted to truth. The author discusses convention T (truth in the Lvov-Warsaw school, semantic concepts in a mathematical theory, T-sentences), Tarski's definition, and evaluates Tarski's account (Tarskian definitions and Tarski's "theory," reduction and physicalism, correspondence and deflationism).

Chapter 5 discusses indefinability and inconsistency in everyday language. The author first examines indefinability before 1931, then he analyzes Tarski's theorem on indefinability and its relations to intuitionistic formalism, as well as Tarski's attempts at axiomatic semantics. In connection with the problem of inconsistencies, views of Kotarbiński are considered.

In Chapter 6, "Transitions: 1933–1935," the 1935 Postscript to

the German translation of Tarski's fundamental paper on truth is analyzed. According to Patterson it shows "the influence of [Carnap's] Logical Syntax to some extent, but also shows Tarski moving away from his Polish roots, especially with respect to Leśniewski, in repudiating the allegiance of the main text of The Concept of Truth to the theory of semantical categories and hence to STT [semantic theory of truth] as the true system of logic" (p. 170). Carnap's views on analyticity and truth are also considered.

The last chapter of the book, Chapter 7, is devoted to logical consequence. The following problems are considered here: Tarski's definition, consequence in Logical Syntax, the overgeneration problem and domain variation, the modality problem and "Tarski's Fallacy," the formality problem and the logical constants as well as the evolution of Tarski's account.

The book ends with "Conclusions," which discusses the Unity of Science Congress held in Paris in 1935 and the reception of semantics. Patterson holds that Tarski seems to have been convinced by the episodes there, and that to him the attitude of Warsaw logicians to separate philosophical views from the scientific work in logic was the right one. He also remarks that "Tarski's philosophical career ended with something of a whimper: the conception that got him started, Intuitionistic Formalism, contained the seeds of its own destruction when Tarski turned it on semantic concepts. His approach to truth was greeted initially with incomprehension by its critics and to some extent its supporters. The techniques he introduced went on to an illustrious life in logic and the philosophy of language, but he himself went on in logic and mathematics" (p. 232).

The length limits by the publisher forced the author, as he explains in the Introduction, to omit some subjects and figures. He decided to stick to figures and works that Tarski himself mentions. In particular one finds in the book no discussion of Bertrand Russell and Gottlob Frege. Tarski received at least some information on Frege from Leśniewski but Frege played no direct role in his own thought. Russell's *Principia Mathematica* have been mentioned by

Tarski at several places but since he did it only to set it aside in favor of his semantic theory of truth, the author decided not to bring Russell into the discussion. Ludwig Wittgenstein figures into the book only indirectly in connection with Carnap and the Vienna Circle. Comparison with Kazimierz Ajdukiewicz can be found only in footnotes. Two other topics have been discussed only marginally: the distinction between language and metalanguage as well as the nominalism of Leśniewski and Kotarbiński (note that Tarski expressed in private discussions his sympathy for nominalism). The reason was the fact that those topics are discussed in the literature, and the interested reader can easily find the appropriate positions.

The book has been edited in a nice and generally careful way. It has an interesting cover showing statues (from the Library of Warsaw University) of Polish logicians from the Lvov-Warsaw Philosophical School—it is a pity that there is no information on that in

the book. Unfortunately there are some problems with Polish characters, especially in the bibliography, for example the titles of some works, like Tarski's famous paper from 1933. Proof reading has not always been careful enough; there are some typographical errors. But this does not depreciate the value of the book. It is in fact a very valuable monograph showing the origin and the evolution of Tarski's views about logic and language in the period 1926–1936.

Roman Murawski
Faculty of Mathematics and Computer Science
Adam Mickiewicz University
Poznań
Poland
rmur@amu.edu.pl

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