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Alfred Tarski. Life and logic. (English)

Cambridge: Cambridge University Press. vi, 425 p. £23.00; \$ 35.00 (2004). [ISBN 0-521-80240-7/hbk]

This is the first biography in book form of Alfred Tarski, one of the greatest logicians of all time. The book consists of 15 chapters with six “interludes” between them. This is followed by the authors’ note and acknowledgements, a list of Tarski’s 24 Ph.D. students, credits for numerous photographs, a Polish pronunciation guide, notes, a bibliography, and an index of names. The “Interludes” are devoted to the logico-mathematical achievements of Tarski: the Banach-Tarski paradox; set theory and the axiom of choice; the completeness and decidability of algebra and geometry; truth and definability; the “publication campaign” of 1939-1946; model theory and the 1963 symposium in Berkeley on the theory of models; and algebras of logic. The “interludes” are written in a rather informal language to give the idea (and, to some extent, the flavor) of Tarski’s and his students’ results and endeavors to as wide an audience of readers as possible. Tarski was born in Warsaw, Poland, in 1901 to Jewish parents. He changed his name and converted to Catholicism but, due to an all-pervading anti-Semitism, was never able to obtain a professorship in his home country although he was arguably the most famous logician in Poland and had an international reputation. One can only wonder what other ground-breaking ideas, results, maybe new branches of knowledge he might have created, had he lived his prime years in a more tolerant society. Three weeks before Germany and then the USSR attacked Poland, thus precipitating the world into WWII, Tarski went for a brief visit to the US. He carried onto the steamship just one light suitcase with a change of summer clothing. This trip saved his life, turned all his career around, and also led to his separation from his family for more than six years. This experience and the fate of many colleagues and friends who remained in Europe and perished by the hand of the Nazis and their numerous willing collaborators left an indelible imprint on Tarski. He always felt most keenly discrimination against his colleagues in other countries of the world and, in particular, contributed his name and prestige to the fight, especially in the early eighties, against anti-Semitism in Soviet mathematics. By the end of WWII Tarski was a professor of mathematics at the University of California in Berkeley. He built there a powerful group of first-rate researchers in logic and methodology and attracted students and talented researchers from the entire world. Everyone interested in the development of logic and methodology, model theory, the history of logic and mathematics in Poland, Europe, the United States, and the world would find it difficult to put this book down without reading it to the very end and would be glad to have it on one’s bookshelves. The authors contacted very many people who knew Tarski personally. They collected their remarks, observations, insights, memories, and other information. They organized all this, including their own memories of Tarski, into an irresistible thriller (this reviewer was unable to stop reading and turn the light off even in the small hours of the morning!). The factual information collected from so many sources and presented in the book seems to be accurate, although

not 100% perfect. For example, when describing mass protests of the leading US mathematicians against behavior and policies of a particular Soviet algebraist who visited the US in 1980, they say that A. I. Mal'tsev and that algebraist were members of the Soviet Communist Party. However, Mal'tsev never joined that party. On p. 364 they write that Tarski was "[t]erribly disturbed by the allegations and the impending boycott" of the lecture by that visitor. However, Tarski was the principal organizer of that boycott and, well before this visitor came to Berkeley, he talked to the reviewer about people who were against that boycott and about his attempts and plans to persuade them to change their opinion. As usual, Tarski's vision was not limited by a particular problem (anti-Semitism in Soviet mathematics). He saw it in a wider context: destruction of the splendid Soviet mathematical school that, in his words, would be the main legacy left in the history of mathematics by the visitor and like-minded people. Few people saw this so clearly at that time. Tarski behaved at Berkeley like a typical European professor of the old school. A graduate student was not a totally independent individual in a formal relationship with another totally independent individual (Tarski). A graduate student was an apprentice, almost a member of the professor's family. For example, Tarski would easily ask his student to do various chores for him (like bringing Tarski's manuscript in early morning hours from his home, where the student spent a sleepless night discussing mathematics with him, to the department, or asking the student to drive to the airport to meet an important mathematical guest, etc.) In that respect he had about as few inhibitions as he might have when asking his child to do something for him. Quite a few other European celebrities who moved to the US at about the same time behaved in a similar way, and the reviewer heard many similar stories (for example, about Hermann Weyl – as seen by his American assistant). An American psyche is more "individualistic" than the European one and many a time the two sides don't quite realize the extent of that difference. That may lead to frustrations from both sides, and the authors did a superb job describing how this behavior of "papa Tarski" was perceived by some of his students who grew up in another culture. Undoubtedly, Tarski felt an analogous frustration with respect to some of his students, and the very fact that the authors say very little about that is evidence of Tarski's mettle as a teacher: no matter how pained he might have felt by the behavior of some of his students, he kept that to himself. The authors did a splendid job writing a much needed book. They deserve our sincere gratitude for the work they did and for the beautiful book they created. Even its dust jacket is a work of art: it reproduces portraits of Tarski and his wife Maria by Witkacy. Everyone familiar with the history of Polish art between the two world wars would instantly recognize that name.

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Classification :

*03-02 Research monographs (mathematical logic)

01A60 Mathematics in the 20th century

01A70 Biographies, obituaries, personalia, bibliographies

01A72 Schools of mathematics

03-03 Historical (mathematical logic)

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