

The Apprenticeship of a Mathematician, by André Weil. Translated from the French by Jennifer Cage. Basel, Birkhäuser Verlag, 1992. 197 pp.

Reviewed by

YVON GAUTHIER

Departement de Philosophie, Université de Montréal
C.P. 6128, Montréal, Québec H3C 3J7, Canada

This is a volume of recollections by one of the most important mathematicians of our time, whose life spans almost the entire century. Partly an intellectual autobiography, it relates his formative years (in Paris, Rome, Göttingen) as well as his wandering years (from India and Russia to Brazil and the United States). This story of a mathematician's life stops in the middle of its course — "al mezzo del cammin di mia vita," in the author's words. The unusually eventful life of a "quiet" mathematician who was imprisoned for the wrong reasons and almost killed inadvertently is told in a candid and direct style. Despite his fascination for beauty in art and his long-lasting interest in languages and poetry (Indian and Spanish among many), André Weil is no friend of rhetoric and sentimental effusion. The death of his sister, the great philosopher Simone Weil, whom he loved dearly, is recalled in a passage of restrained language and condensed emotion.

André Weil is not a man of many words. His recollection of Paul Valéry, who was reigning as poet laureate and academician at a time could be summarized as "31 is a nice prime number." André Weil was 31 when he met Paul Valéry. Among mathematicians, he was on more equanimous terms with Jacques Herbrand, Elie Cartan, Henri Cartan, Jacques Chevalley, Jean Dieudonné, C. Ehresmann, C.L. Siegel, E. Artin and many important mathematicians of his time (among them Mordell, with whom he had an insignificant encounter).

For the student in foundations of mathematics, it is noticeable that Hilbert is remembered mainly for his dignity and his caustic wit, while Brouwer is quoted for his polemical attitude. Even within the Bourbaki circle, of Hilbertian spirit as far as the structuralist-formalist attitude is concerned, Hilbert's foundational stance does not seem to have played a major role, except maybe for the insistence on the axiomatic method. The ideas of structure and, more importantly, of isomorphism would not ripen before the concepts of category and morphism, but it seems that it is Bourbaki who is responsible for the precise meaning of isomorphism as structure-preserving bijection. Weil also says that he has introduced the notation for the null set thanks to his knowledge of Norwegian (the