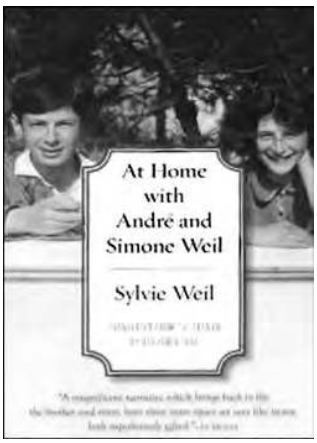
Book Review

At Home with André and Simone Weil

Reviewed by Michèle Audin



At Home with André and Simone Weil
Sylvie Weil
(English translation of Chez les Weils*, translated by Benjamin Ivry)*
Northwestern University Press, October 2010
US$24.95, 192 pages
ISBN-13: 978-0810127043

This book is about the family of the mathematician André Weil (1906–1998), one of the most influential number theorists in the twentieth century. The family consisted of a grandfather and a grandmother (Bernard and Selma Weil), a father (André Weil) and a mother (Eveline Weil), a stepson (Alain de Possel), and two daughters (the book's author Sylvie and her sister Nicolette). And yes, there was an aunt, too, Simone Weil (1909–1943), the philosopher. The book tells Sylvie's story and that of her family—of how it was to be André Weil's daughter and Simone Weil's niece, and of how Sylvie made her way, in life and in this family.

André Weil's Daughter…

Mathematicians will have no difficulty understanding that it was not very easy to be André Weil's daughter: Having a father who was a brilliant and famous mathematician, as well as the main character in the Bourbaki adventure, complicated Sylvie's efforts to find her own way in life. In addition, he had a circuitous career. The daughter of a French Jewish refugee, Sylvie Weil was born in the United States in 1942, left for Brazil in 1945, then left Brazil for Chicago in 1947. She was raised by her parents, of course, but also by her grandparents, in particular by her two grandmothers. While her father was a professor in America, Sylvie studied in Paris, which meant, for instance, that at age eleven she took, alone, the "direct" Air France flight Chicago-Montréal-Gander-Shannon-Paris.

…**and Simone Weil's Niece**

And there was an aunt, too, a deceased one: Sylvie was the baby daughter who arrived just a few months before her aunt, the philosopher Simone Weil, who died at age thirty-four. This was another heavy inheritance, inside the Weil family and outside it, as the baby daughter became a little girl, then a young woman, looking very much like her aunt—an aunt, who, moreover, was considered a saint. The little girl was surely a comfort to her mourning grandparents, but this heritage must have been quite a burden for her. A professor of French literature in several American universities and a writer,[1] Sylvie obviously found her own way. But she had to learn about and to understand the aunt she so closely resembled, through the sometimes difficult relationships in the family.

Visiting André Weil in Jail in 1940

Because he had decided not to serve as a soldier during World War II, André Weil was jailed from February to May 1940 (this is also the reason that he could not get a position in France after the war and why the life of the Weil family was geographically so complicated). In his jail cell, he worked quite a lot, and he was supported by his

Michèle Audin is professor of mathematics at the Institut de Recherche Mathématique Avancée at the Université de Strasbourg. Her email address is michele.audin@math.unistra.fr.

[1] *Author of* A New York il n'y a pas de tremblements de terre, Le jardin de Dima, Les vendanges de Rachi, *among others, and two novels for young adults translated in the U.S.,* My Guardian Angel *and* Elvina's Mirror.

Bourbaki friends and by his family, who would visit him, bring him books, and so on.[2]

Of course, Sylvie, who would be born in 1942, was not present then. But, from a simple sheet of paper on which André's mother, father, sister, and wife had each written a sentence for him, Sylvie is able to reconstitute a portrait of this group visiting him in his jail cell. She is also able to evoke the different personalities of these four people. This is a beautiful example of the subtle way she conveys delicate things in the book.

Riemann's Zeta Function

As this is a review for the *Notices*, let me make it unbalanced and concentrate more on the André side than on the Simone one. Readers should, of course, not expect to learn any mathematics here. However, there is a formula in the book,

$$1 + \frac{1}{2^s} + \frac{1}{3^s} + \cdots + \frac{1}{n^s} + \cdots,$$

the definition of the Riemann zeta function, which André Weil wrote on a piece of paper for his daughter when she was learning how to add fractions. This is the only formula in the book, but it signifies his constant interest in Dirichlet series and the Riemann hypothesis. This is another hint about how the book proceeds, by light brush strokes.

The Sugar Bowl

One of the themes of the book is the failure of Simone and André Weil to adapt to ordinary life and the real world. Many touching details in the book illustrate this failure. For example, the knowledge of where the sugar bowl was kept in André and Eveline Weil's house was incompatible with the higher subjects occupying André's brain. Reading the book, we understand that this was not just absentmindedness, as one might think, but something more profound.

Walks

But André Weil was a father, too, and Sylvie recalls quite a few stories about him and their father-daughter relationship. They used to have long walks together, in the Luxembourg Gardens in Paris, in São Paulo, in Chicago, or in Princeton, the little girl with her tall father. And there is also the story of the (adult) daughter accompanying her old father to Japan in 1994, where André Weil would be awarded the Kyoto Prize (together with Akira Kurosawa).

I will not comment on the English translation, by Benjamin Ivry, but let me mention the design of the cover, in which, unfortunately, the siblings André and Simone are pulled apart by the title of the book.

By now it should be clear that this book is not a biography, neither of André Weil nor of Simone Weil. But it does allow us to enter into the Weil home and to have a tactful glance at a few colorful Jewish ancestors, at Selma and Bernard, at the privacy of Simone, André, and Eveline—and at Sylvie.

I hope the readers of the *Notices* will enjoy, as much as I did, reading this both reserved and intimate account of how it was to be at home with the Weil family.

[2] *For André Weil's 1940 story, see* [2]*; for the mathematics he made in prison, see the enlightening comments in his complete works* [1].

References

[1] A. Weil, *Œuvres scientifiques, Volume I*, Springer, 1979.

[2] ———, *The Apprenticeship of a Mathematician*, Birkhäuser, Basel, 1992, translated from the French by Jennifer Gage.