

Emmy Noether: The Mother of Modern Algebra

Reviewed by Benno Artmann

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M. B. W. Tent

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The catalogue of the Library of Congress classifies this book as juvenile literature, and in this respect it may serve its intentions well. Beyond that, a person not familiar with Emmy Noether's (1882–1935) life and the academic and political situations in Germany in the years between 1900 and 1935 may profit from the general picture the book provides of these times, even though it may sometimes not be easy to distinguish between facts and fiction.

The chapters of the book are: I, Childhood; II, Studying at the University; III, The Young Scholar; IV, Emmy Noether at Her Prime Time in Göttingen; and V, Exile.

The book is not an historical work in the academic sense. By contrast, and in agreement with her intentions, the author creates a lively picture more in the sense of a novel—letting various actors talk in direct speech, as well as providing as many anecdotes as she could get hold of and inventing stories that in her opinion fit into the general picture. That way, her young readership will appreciate the story and, in addition, along the way will get a vague impression of the mathematical accomplishments of Emmy Noether. In particular, the story of the “Noether Boys” at the Mathematical Institute in Göttingen 1925–1932 makes agreeable reading and provides a lovely picture of her group of students in those years.

Clearly, one cannot expect any specific information about Noether's mathematical work.

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The author has to be content with rather general information about “abstract algebra” and has to reduce the few absolutely necessary mathematical definitions to the capabilities of advanced high school students, as in the case of an “ideal” on page 89.

One thing, however, that could easily be corrected is to be found on pages

105–106. Here the author reports that the students were “shuffling their feet loudly” when the professor entered the classroom and did so again in appreciation at the end of the lecture. Just the opposite is right, as the reviewer remembers from his own student days: One *stamped* the feet at the beginning and end, but *shuffling* the feet was a sign of extreme displeasure during or at the end of the hour.

Well, let us stamp our feet at the end of the book!

No—there is something more useful to be mentioned: On pages 161–168 are to be found several memorial quotations from Hermann Weyl, P. S. Alexandroff, B. L. van der Waerden, and A. Einstein about the life and work of Emmy Noether. These may be very useful for anybody who wants to add a few biographical remarks when teaching Noether's concepts in a course on algebra.