Zuzana Hucki
School of Science & Technology
Nottingham Trent University
United Kingdom

UDC 51:929]:82.09
DOI 10.46793/Uzdanica19.S.253H
Received: November 21, 2022
Accepted: December 2, 2022

BOOK REVIEW: *NEW YEAR'S PRESENT FROM A MATHEMATICIAN* BY SNEZANA LAWRENCE

When I first received the book during the lockdown, I was slightly disappointed, as I was expecting a large book. My disappointment faded very quickly when I realised that the book is jam-packed with information, stories, and notes for further research.

The book is not chronological in an ordinary sense. The author has lifted us into the fourth dimension and connected different mathematicians through historical facts, birthdates, and death anniversaries organised in chapters covering every month from January to December.

Mathematics is metaphorically represented as a desert, and mathematical stories are represented as drops of wisdom. While the author is motivated by a personal experience of being lost in the desert, I could not help thinking of the quote from *The Little Prince*: "'What makes the **desert** beautiful,' said the **little prince**, 'is that somewhere it hides a well…' "Mathematical discoveries presented in this book are like wells discovered in a desert.

January's chapter starts with Newton, one of the greatest British scientists and mathematicians, and finishes with the poem "The Newtonian system of the world, the best model of government: an allegorical poem", which made me wonder: did any other mathematician have a poem written about them?

February's chapter borrows the date of completion (February, 532 AD) of the Hagia Sophia, a Christian cathedral in Istanbul, is filled with geometry and the story of the Greek mathematician Thales. As we would not know Thales's date of birth or death, the author chose a topic very close to her heart, architecture, and filled the chapter with the connections between maths and architecture.

A similar connection is the main topic of the chapter "March": Christopher Wren, the mathematician and architect put in charge of St. Paul's restoration after the Great Fire of London. The chapter on March, like the beginning of spring, is filled with beauty. Beautiful drawings of different curves and the answer to the question, "Beauty is in the eye of beholder – or in Mathematics?" It also includes the story of how mathematicians proposed the questions and solved the problems

zuzana.hucki@ntu.ac.uk

of catenary curves. The author states that "before the internet, search engines, and social media, scientific news still managed to travel… mathematicians from around Europe corresponded and exchanged ideas and often posed to each other their mathematical questions, problems, and challenges".

The following two months are my favourite. They both celebrate female mathematicians.

"April" celebrates the amazing mathematical brain of Emmy Noether who is creditedd as the mother of modern algebra. Lawrence compares modern algebra to modern art. Did you know that ideals in abstract algebra are special types of rings, subsets that are closed with respect to the "multiplication" operation of the ring?

The chapter on May brings the wonderful story of the first female mathematics professor, Italian Maria Agnesi and the discovery of another type of curve named the 'Witch of Agnesi.' This chapter also uncovers the story of the book *Newtonianism for ladies*, written by Francesco Algarotti, which was a popular science bestseller in the 18th century; it was translated into English too. The author is suggesting that we should forgive the patronising and dismissive tone of the writing, considering that science and maths needed to be explained differently to females. It brought much good by spreading Newtonian science throughout society, allowing Agnesi to become a mathematician and her discoveries to be recorded as a part of the history of mathematics.

Do not miss the chapter on September and the story of Paul Erdos, a true citizen of the world. Discover why he would greet his co-researcher hosts with "my brain is open" and learn about his amazing generosity through offering rewards for unsolved mathematical problems.

I really enjoyed the author's rich, poetic style of writing.

For future books, I would urge the author to expande her metaphorical desert of discovery to include the history of mathematics from the rest of the world, less known and explored than Europe's.

To find the explanation for the unusual title of the book you need to read December's chapter and discover what a mathematician's present to a friend, who loves maths, could be.

This book is a wonderful present which keeps giving even after multiple readings.