Uncle Petros and Goldbach's Conjecture: Book Review

by Manjil Saikia - Saturday, June 25, 2016

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Apostolos Doxiadis' novel *'Uncle Petros and Goldbach's Conjecture'* has been in my to-read list for a long time. Recently, I had the pleasure of reading this short novel based on Goldbach's conjecture, which states that *every even number greater than 2 can be represented as a sum of two primes*. This long standing problem was proposed by Christian Goldbach in a letter to Leonhard Euler and has not been proven for more than two centuries now. Along with Riemann Hypothesis, this conjecture is one of the outstanding unsolved problems in number theory and all of mathematics. This novel by Doxiadis is about a Greek mathematician, Petros who attempts to prove this conjecture. The story is told by his unnamed nephew and is based on his recollection of the time spent with Petros.

The book is not an attempt to discuss the problem of Goldbach, in fact there is very little mathematics in the book. However, the story is moving for two reasons. Firstly, it is about a mathematician's obsession and single minded devotion towards the solution of a single problem and is a good life lesson in the merits of concentrating on one's life goals. Secondly, this book is also a narrative of what are the pitfalls that lie around in trying to solve a problem, not necessarily a mathematical one. The author brings forth different elements of any person's life in the story of Petros. There is the early childhood markings of a genius, then the first love and subsequent heart-break, and subsequently Petros' resolve to solve the most outstanding question in mathematics to bring back the love of his life. The book is as much a drama as it is the biography of a fictional mathematician.

Throughout the book we get to meet many legendary mathematicians as characters. From Constantin Caratheodory to G. H. Hardy, we see the varied mathematical people in the early 20th century. We meet Kurt Godel, who plays a significant role in the story as well as a young Alan Turing, who is a bearer of bad news for Petros. Even Ramanujan makes a cameo in between while Petros is working with Hardy and Littlewood. The book will be enjoyable to all mathematicians alike. However, the message and portrayal of the protagonist's life is not for the faith hearted. A true mathematical tragedy is depicted in the book, which perhaps might deter young students to take up mathematics seriously.

The author holds a degree in mathematics and as such the mathematics discussed in the book is accurate, but not too rigorous to loose the flair of the storytelling. However, at least on one occasion he makes an error in a historical remark which we can safely ignore in this review because the book is meant to be a work of fiction. The book is short and to the point, much like mathematical papers and is interspersed with several anecdotes from the lives of various mathematicians and some occasional mathematical trivia. Overall, I found the exposition commendable and would recommend the book highly to students and professionals alike.

Title: Uncle Petros and Goldbach's Conjecture: A Novel of Mathematical Obsession
Author: Apostolos Doxiadis
Publisher: Bloomsbury
Price: Rs. 642 (Amazon)

Rating: 4/5

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