BOOK REVIEWS

Amar Sodhi

A Certain Ambiguity: A Mathematical Novel
By Gaurav Suri and Hartosh Singh Bal, Princeton University Press, 2007
Reviewed by Mark Taylor, Halifax, NS

A Certain Ambiguity is subtitled A Mathematical Novel. Mathematical it certainly is, and it is novel, but a mathematical novel... .

The book opens with Ravi Kapoor recalling the day his mathematician grandfather (bauji) gave him a calculator. The gift was to initiate bauji’s plan to “get Ravi passionate about mathematics” and together with the gift came an arithmetical teaser that set him along the way.

Unfortunately, the day after the plan was set in motion, bauji died and young Ravi was abandoned to a school system dedicated to rote learning and the accumulation of facts. Although Ravi’s grades were excellent his schooling was, in his words, a joyless endeavour. However, the high grades and a bequest from bauji (eventually) enabled Ravi to enter Stanford. The young Kapoor’s undergraduate years were initially those of a dilettante; he dabbled in this and that but no subject had lasting interest for him. His eventual major, Economics, was chosen to satisfy his father who felt it would make Ravi attractive to a wide range of corporate recruiters.

Just as it seems that our boy is destined to become an acolyte in the service of Mammon, he meets Dr. Nico Aliprantis, mathematician, jazz saxophonist manqué and teacher extraordinaire. Ravi is invited to join Nico’s Math 208 class “Thinking About Infinity”, and this is where the story really begins. The authors use Aliprantis to draw us into a mathematical feast. We are fed tasty morsels after tasty morsel that serve to addict the neophyte and bring a smile to the lips of the cognoscente. From Zeno to infinite sums, counting to Cantor, the infinity of prime numbers and the irrationality of the square root 2.

The table is well set and the servers, Nico, Ravi, and other members of the Math 208 class lay out the dishes and anticipate our needs like all good wait staff. However, if the food does not suit the reader’s palate there is little nourishment in the characters, that is until the authors introduce a new literary and mathematical thread. Ravi discovers that as a young man his grandfather, formally known as Vijay Sahnis (VS), had spent some time in a New Jersey prison.

The incarceration came as news to Vijay Sahnis’ surviving family and Ravi set about to unravel the mystery. He tracks down a transcript of discussions between VS and a respected New Jersey judge, John Taylor. Using transcripts and newspaper articles together with some augmentation, the authors develop a situation and characters that hold the reader’s attention... .
while a new mathematical line is developed. The new line introduces geometry and the idea of formal axioms.

Very soon the Judge and VS are discussing Euclid's fifth postulate and this leads them to non-Euclidean geometries and eventually into the very nature of mathematics. The dialogue between VS and the Judge is interwoven with observations from members of the Math 208 class and this allows the introduction of the Continuum Hypothesis and mention of the works of Gödel and Cohen.

Suri and Bal succeed admirably in describing and explaining some beautiful mathematical results in such a way that they are accessible to people with little formal training in the discipline.

A personal quibble: The book contains over a dozen "Journal Entries" of one sort or another ascribed to various mathematicians with the authors' acknowledgement that the contents of many are either apocryphal or fictitious (there is no attempt to deceive the reader – each entrant is explained in the notes at the end of the book).

For my taste, the time and effort spent in constructing most of the journal entries would have been better employed in providing the reader with some good recipes. In one part in the book Nico invites a group of his students to a simple dinner consisting of a Greek salad, lamb marinated in a garlic sauce, and homemade pita bread. The preparation of the meal is described but not in detail. Recipes would have been most appropriate. Ravi might have reciprocated Nico's generosity with an Indian meal; perhaps pakoras, dhall, rice, chappati, a good chicken dish or rogan gosht, brinjal, bindi, and kheer. A good kheer recipe is hard to come by.

Finally the question: To read or not to read?

Imagine you are in a doctor's or dentist's waiting room sifting through dog eared copies of Readers Digest, MacLean's, Time, Field and Stream, Ecum Secum Hog Breeders Quarterly, etc., when you come across a copy of Crux with Mayhem. If you pick it up and scan through it and find anything of interest in it, I daresay you will find more than a little to enjoy in A Certain Ambiguity.