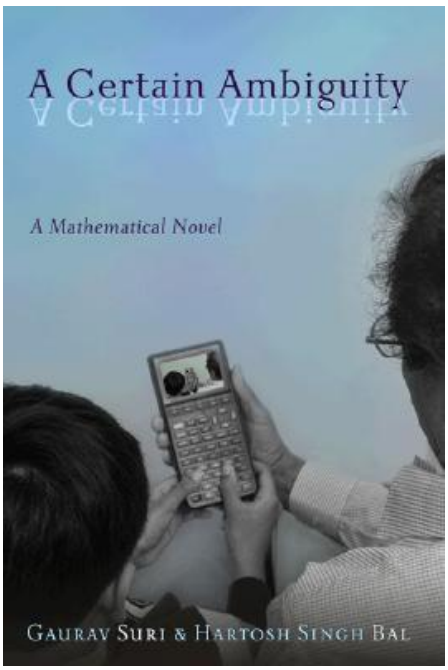

A Certain Ambiguity: A Mathematical Novel

Gaurav Suri , Hartosh Singh Ball

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While taking a class on infinity at Stanford in the late 1980s, Ravi Kapoor discovers that he is confronting the same mathematical and philosophical dilemmas that his mathematician grandfather had faced many decades earlier--and that had landed him in jail. Charged under an obscure blasphemy law in a small New Jersey town in 1919, Vijay Sahni is challenged by a skeptical judge to defend his belief that the certainty of mathematics can be extended to all human knowledge--including religion. Together, the two men discover the power--and the fallibility--of what has long been considered the pinnacle of human certainty, Euclidean geometry.

As grandfather and grandson struggle with the question of whether there can ever be absolute certainty in mathematics or life, they are forced to reconsider their fundamental beliefs and choices. Their stories hinge on their explorations of parallel developments in the study of geometry and infinity--and the mathematics throughout is as rigorous and fascinating as the narrative and characters are compelling and complex. Moving and enlightening, *A Certain Ambiguity* is a story about what it means to face the extent--and the limits--of human knowledge.

A Certain Ambiguity: A Mathematical Novel Details

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Author	:	Gaurav Suri , Hartosh Singh Ball
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From Reader Review A Certain Ambiguity: A Mathematical Novel for online ebook

Naga Avasarala says

This book is unique in it's theme of presenting mathematical concepts in the form of a story. It might not be a literary gem in plot and character development but it is nevertheless refreshing and engaging especially if you have a liking for logic and reasoning. We are introduced to interesting mathematical techniques we learnt in high school but forgot along the way and we rediscover this thrill along with the characters of the story. There are inspired ideas in the book like the journal entries which lend it an emotional connect and give a human feel to the abstract world of maths. The conversations between 2 main characters in the book especially inspire us to think more in our daily lives. A must read for all.

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ka?yap says

The two main topics in this novel are set theory and geometry. The mathematics that is presented here is the usual and well known theorems. In Set theory, starting from Zeno’s paradoxes, infinite series, to the theory of sets and the continuum hypothesis. And in geometry, starting from the Pythagoras theorem, Euclid’s axioms and to the development of Non-Euclidean geometry. They are developed parallelly (and in two parallel story lines, one taking place in contemporary times and the other in 1919) showing the independence of continuum hypothesis and Euclid's fifth postulate.

The main goal of the novel seems to be the epistemological implications of the development of theory of infinite sets and Non-Euclidean geometry. It raises some very important questions about mathematical truth but the writers only give a casual overview of mathematics and they do not go deep enough to better understand their implicationson the nature of truth.

For a beginner, this could be a fascinating tour of the basis of mathematics. It does a pretty good job of introducing continuum hypothesis and Non-Euclidean geometry in elementary terms. For someone already familiar with the mathematics and philosophy dealt with in this book and its historical basis, there isn't much here as the story itself isn't very fascinating.

But i did like the last part of the book, the journal entry of the judge where he and Vijay Sahni come to terms with the lack of certainity.

Craig Jorgensen says

Good math book. Very bad novel.

Ton van Gessel says

I really love this book. I leads you from Euclid to Cantor on a quest for certainty and proof (and even faith). Besides that it is also a novel ,an adventure story (sort of) and there is even a hint of a romance. Sometimes I

did have to reread a page or two (I've only done high school). That's also part of the charm of this book. Probably the best book I've read so far.

Christopher says

This may end up being my favorite book of this semester. Since the book is written by a mathematician whose second language is English, I don’t hold the bad writing against him. Actually, it’s bad in all the right ways. Watching people flirt by discussing Cantor’s theory of infinity is as amusing as it sounds, and the fact that the guru math-prof has a ponytail is just icing on that cake. Beyond that, the author does a great job of mixing math and philosophy into the wonderful, hot mess that it is. So when all’s said and done, the book is hilarious (unintentionally) and profound at the same time. If you think algebra 2 is pointless, you really need to read this book.

Ghada says

This book was such a pleasure to read.

It is about an undergraduate student with a former interest in mathematics. He decides to take a mathematics course on infinity as an elective in hope of rekindling his passion for math. Through his professor, he discovers a paper that his mathematician grandfather wrote, and here the story begins...

The storyline will have to be discovered by the reader through another source. However, I will say that the form of this story is mostly narrated as a dialogue combining mathematics, religion and philosophy. There are easy-to-follow proofs and theories here and there, and a few diagrams, all of which explain the nature of the axiomatic theory to the reader. Most of the mathematical debates concern work done by Euclid in geometry and Cantor in set theory. I found it to be a very enjoyable introduction to the continuum hypothesis.

I was actually quite surprised at how much of a page turner this book turned out to be. It was inspiring, though provoking and good fun! I believe that the authors achieved what they set out to do as they described in the Authors’ Note:

"Our principal purpose in writing A Certain Ambiguity is to show that mathematics is beautiful. Furthermore, we seek to show that mathematics has profound things to say about what it means for humans to truly know something. We believe that both these objectives are best achieved in the medium of a novel. After all it is human beings who feel beauty and it is human beings who feel the immediacy of philosophical questions. And the only way to get human beings into the picture is to tell a story."

Mathematics is truly beautiful! Both numbers and words can attest to that.

And as a final philosophical note, I will directly quote this statement from the book:

“Some may argue that our individual choices are already made for us and the idea of “free will” is an illusion. To them I merely reply that even if choice is an illusion, our perception of being able to choose is not. So our freedom is real- at least as real as anything else we live by.”

David says

This is quite a unique and enjoyable book. Encapsulated as a novel, the book covers elementary mathematics of infinity, set theory, and Euclidean and non-Euclidean geometry. It covers the history of these topics, as well. And it isn't dry--the subjects are covered in a easily-understood, "Socratic" approach. Nico, the professor of mathematics, knows how to motivate students, cultivate enthusiasm, and lure students into a deeper understanding of the topics of his course. Nico also shows how mathematicians think about their work, and about the world.

A major theme in the book is the hierarchy of provable theorems, built upon fundamental axioms that are unprovable, but "self-evidently true".

The main character is an Indian student, Ravi, who is enrolled as an economics major at Stanford University. He learns that his late grandfather, who he had adored as a child, had spent some time in a jail in New Jersey! It takes some time for Ravi to unfold the story of his grandfather, who had been a mathematician and an atheist. It seems that his grandfather had been arrested under an obscure law in New Jersey against blasphemy. Of course, this law is in contradiction with the freedom of speech clause in the Bill of Rights. A central question is whether mathematics is built on firmer foundations than religions.

While the story in the novel isn't really believable, it is a fun read if you enjoy mathematics, and highly educational at the same time.

Martini says

"Eine gewisse Ungewissheit" ist ein Roman, der sich in Form zweier Handlungsstränge – Student an der Uni sowie Großvater im Gefängnis – mit der Betrachtung der Unendlichkeit auseinandersetzt.
Er handelt von dem jungen Inder Ravi, der in Amerika Wirtschaftswissenschaften studiert. Als Kind entwickelte er durch seinen Großvater Vijay, der ihn mit mathematischen Rätseln herausforderte, eine große Begeisterung für Mathematik, doch nach dessen Tod verlief sich diese Faszination. Als er nun an der Universität den Dozenten Nico kennenlernt und dieser ihn zu seinem mathematischen Seminar zum Thema Unendlichkeit einlädt, wird seine Neugier geweckt. Im Gespräch mit Nico stolpert er zufällig über ein Dokument, das besagt, dass sein Großvater, als dieser in Amerika an einer Kleinstadtuniversität unterrichtete, für einige Zeit wegen Verstoßes gegen das Blasphemiegesetz im Gefängnis saß. Ravi und einige seiner Freunde aus dem Seminar für Unendlichkeit setzen nun alles daran herauszufinden, wie es dazu kam, und stoßen auf die Gesprächsprotokolle zwischen dem für den Fall zuständigen Richter Taylor und Ravis Großvater. Verknüpft werden diese beiden Handlungsstränge durch fiktive Tagebucheinträge und Briefe der Wissenschaftler, die sich mit den jeweils im Seminar oder in den Gerichtsprotokollen behandelten Themen befasst haben.
"Eine gewisse Ungewissheit" ist – gewissermaßen – ein mathematischer Roman. Aber, liebe potentiellen Leser, habt keine Angst davor! Man muss kein mathematisches Genie sein, um der Handlung folgen zu können. Ein gewisses Interesse an Naturwissenschaften sowie die Grundlagen der Mathematik sollten immerhin schon Vorraussetzung sein. Die im Buch aufgeführten Beweise nachvollziehen zu können ist für die Spannung des Buches jedoch keineswegs erforderlich, allerdings habe ich festgestellt – ja, ich, die ich Mathe im Abi abgewählt hatte! – dass der Aha-Effekt im Moment des Verstehens ein echtes Erfolgserlebnis ist.
Dieses Buch erhält von mir vier Sterne; einen Stern Abzug gibt es dafür, dass sich einige Fehler

eingeschlichen haben, wie zum Beispiel die Abbildung eines falschen Diagramms, das eine Seite vorher schon gezeigt wurde, oder falsche Benennungen, wenn eine „einsame Menge“ zuerst „L“ (wohl für lonely) und dann „E“ (für einsam) genannt wird. Diese Fehler hätten durch ein wissenschaftliches Lektorat wohl vermieden werden können. Der gesamten Spannung der Geschichte und dem Lesespaß, den es bietet, tun sie jedoch keinen großen Abbruch. Daher von mir eine Empfehlung für alle naturwissenschaftlich interessierten Leser… und auch für alle Nerds, die mal etwas anderes als Fachbücher lesen wollen!

Arron says

I really wanted to give this one 4 stars; the problem is that it doesn't hold up nearly so well as a novel as an introduction to mathematical philosophy. That said, it was an enjoyable read and I'd certainly recommend it.

Avid says

Ever wondered if there is any connection between mathematics and God? What if I say, the existence of God can be proved or disproved mathematically? The book ‘A Certain Ambiguity’ explores something similar.

The book follows the life of an Indian mathematician and tries to draw parallels between maths and faith and life, in general. While the story and the characters are fictional, the intriguing mathematical proofs are as real as you and I are. The famous Pythagorean theorem, the Euclidean geometry find a place in this book. What occupies the most part of the book is infinity. I had never thought of infinity in terms of an infinity being bigger or smaller than another infinity. The book taught me a lot about infinity and maths in general, which I didn’t know. Was I sleeping through my math class when my teacher covered these?

When I picked up this book, I never expected it to be a page-tuner. For the readers who have forgotten basic math, the authors have thankfully included an introduction to all basic concepts wherever necessary. Anybody having any inclination towards mathematics will love this book. The proofs are beautiful. Even for those who hated maths in school, that non-mathematical part of the book will be interesting. Characters, story, style of writing don’t matter, atleast didn’t matter to me. The very question of ‘Can you prove or disprove mathematically that God exists?’ is intriguing enough for anybody to pick up the book, what say?

Does the book answer that question? Well, that is for you to find out. It might not give you a page of equations which leads to the proof, but it does answer in some way. Only if you think so. You will know what I mean when you read the book.

This book reminds me of another book The God Delusion by Richard Dawkins, in which the author apparently proves that God does not exist. Has anyone read that book?

Lindsay from TrulyBooked says

The math is certainly interesting in this novel and it's presented in a way that makes it accessible to people like me who do not have much of a background in math.

That being said, the prose lets the entire concept down. It feels like there was so much interest in the

mathematical side of things that when the plot comes about or when there are long sections detailing something that happened in the past, I found myself bored. I would have enjoyed this book more if it were nonfiction and explaining mathematical concepts than the novel that I read. It seems almost as if the mathematical concepts were decided first and everything else is forced to bend around them.

There are interesting ideas here which just aren't put together well. The novel combines present day prose, mathematical diagrams, journal entries from older mathematicians, court interview transcripts, newspaper articles, university lectures, emails, and regular notes. The transitions between these are jarring to say the least and all the excitement that I felt while first reading the book drained away the further I got into it.

The characters and the plot are completely overshadowed by the math and the potential for beauty in this book was overshadowed entirely by its lack of focus on the narrative itself. I had expected beautiful prose and beautiful math which elevated each other, but I feel like I was left short. The more I read, the more it sounded like the characters were simply there to prove more of the math side of the story than to actually be people. As a nonfiction book with the plot, characters, and jarring set-up left out, I think that I would have put this up there in my favourites. As a novel though...

I sadly can't give a recommendation.

Komal says

What is faith? why do u believe in something- what is true, what can be true, is truth relative?
No, this book does not answer any of these questions, but it does take u on a journey- a journey which is about revelations;and this journey is made more beautiful by using mathematics as a tool.
The author has questioned certain paradigms believed to be true by using the simplicity of Eucladian Mathematics.He tries to establish a line of thought which says that just like mathematical theorems are based on axioms which are inevitably true, religion and faith in god, infact faith in anything is also based on the simple axiom that everything was created by someone!
Though astounded one might be by this reasoning, the beauty lies in the simplicity of it - that everything ultimately is based on
one starting point, and that starting point can be different for different people.
The most delightful aspect about this book was that how intricately the authors have woven a piece of fiction, around non-fiction.
The book takes you back in time - when mathematics was evolving; (not that it isnt now) but the likes of Einstein and Ramanjunam
were still formutaling theories and refuting various hypotheses, but even back to the time of the Greek mathematicians and philosophers.
And amidst all this, the authors have also highlighted the dilemma faced by Gen Y today(passion or money), and have also been successful in bringing out the contrast between the clear-headed and the confused.
thus, to conclude there is no ambiguity about the fact that this book will keep you hooked till you finish it!

Bill says

This is another book I had high hopes for, based on the blurb and the recommendation of a friend. It has math. It has philosophy. Since those subjects both interest me, it sounded full of potential. But I wound up disappointed. I was so disappointed, I almost didn't finish the book.

My main disappointment is with the plot, which was paper-thin and obvious from the beginning. There's this guy and he, through a few quickly dispensed situations, winds up in college with graduation day approaching. A series of unconvincing events puts him in a class that is part math class, part philosophy discussion. He makes new friends. He meets a girl. Already you know that they will discuss math. They will discuss philosophy. He might get involved with the girl.

So they do all that. The author tries to make things more interesting by adding the sudden discovery that the guy's beloved grandfather spent time in jail and so he has to research that, too. But all that plot description makes it sound more interesting than it really is, because that takes up about 25% of the words in the book. The other 75% is taken up with endless dialogs about math and philosophy, either presented in the classroom, or a jail cell (while a judge and the grandfather work through the motivations for the grandfathers 'objectionable' behavior), or at various contrived situations around campus.

At various points the endless dialog, which is always in language far to lofty to come out of ordinary, human mouths, is broken up by fictionalized letters and journal entries from historical mathematicians and philosophers. These are also written in language either too lofty or too modern to be based in reality. The contrived and awkward situations, discussions and documents all kept me from connecting with the story and characters and really enjoying the ride.

This book would be improved by either ditching the 'novel' portion or making it stronger. As it is, the math exposition, while interesting and central to the theme, overwhelm the fiction.

The only reason this gets 3 stars, rather than 2, is because of the intriguing subjects. It did get me to thinking deep thoughts, which I believe was the point of it. But the lack of personal connection and the awkwardly scholarly language kept it from approaching 4 stars. Only recommended if you like math (or are unoffended by it) and are likewise unoffended by flowery dialog and thoughts that do not reflect the way real people behave.

Moses Operandi says

I revise my earlier judgment: this isn't crap. It's actually a fascinating journey through the history of mathematics.

It's not well-written.
The characters are not interesting.
The dialogue is sometimes anachronistic and laughable.

But the thinking underpinning this book is great. Awesome, humbling conclusions about mathematical certainty.

BlackOxford says

So Many Stories; So Little Point

A Certain Ambiguity is appropriately titled; it is highly ambiguous in both form and content. It starts as a Bildungsroman of a Stanford University student from India, fades into an Historical Mystery about the student’s mathematician grandfather, lapses occasionally into a rather unromantic Romance, and ends up

commenting on the conflicting duties toward self, family and humanity. A substantial portion of the book is concerned with the axiomatic method as applied in mathematics, and a comparison of this method with that of religious faith. It also provides extended tutorials on the rigours of geometry and the mathematics of infinity.

So if you are interested in why Euclid's fifth postulate is like Cantor's Continuum Hypothesis, this may be your thing. If not, it doesn't have the necessary literary qualities to justify either its price or the investment in reading-time. Its observations are trivial where they are not tedious. Its suggestions - particularly about the similarity of religious faith and mathematical commitment - are not only wrong, they are dangerously stupid (See here for a refutation of the contention that scientific and religious faith are analogous: https://www.goodreads.com/review/show...). Page after page of mathematical proofs and faux correspondence by philosophers ancient and modern constitute a travesty of narrative story-telling.

At one point the protagonist has an epiphany: *"Maybe it's because mathematics is not a spectator sport. You have to do it to appreciate it."* Perhaps this insight is worthwhile. Of course it also obviates the point of the book: An axiomatic contradiction which should have prevented its publication. If you have an interest in literary mathematics, I suggest a far superior alternative: https://www.goodreads.com/review/show...
