Review of
Who killed Professor X? by Thodoris Andriopoulos and Thanasis Gkiokas

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This book is a good example of a nice idea falling short of the intended aim when realized. So let me first explain the idea, and then discuss why in my opinion the realization does not work.

The authors wanted to write a book popularizing mathematics to a large audience. An effective way (actually, the most common way) for bringing the general audience closer to mathematics is by telling the stories of mathematicians, using the human interest side to reduce prejudices against the scientific side. On the other hand, one of the most popular genres today is mysteries: so why do not write a detective story involving mathematicians? Ok, this has already been done, several times; we need a new approach. The victim should be a mathematician; the suspects might be mathematicians also… idea: we might use as suspects some of the most famous mathematicians of all times, recounting some episodes from their lives in such a way to provide motives for the murder. Sure, having them all together in the same moment of time will force us to adapt the details of their stories to the year we decide to set our book in; but we can also add an appendix containing short biographies of these mathematicians, explaining in particular what we had to change in their lives to fit our plot. It would also be nice if the motive of the murder would be mathematically related… furthermore, one of the best way to appreciate mathematical ideas is by doing some mathematics; so we could put in the book some problems for the reader to solve. The problems should be somehow related to the investigation; but the level of difficulty cannot be too high, if we do not want to scare readers away they should be solvable by using high-school mathematics only. By the way, we should put some pictures inside, to entice the reader… even better: we can tell the story as a graphic novel, so that even the reader most suspicious toward mathematics will be lured in by graceful drawings and appealing colors…

So this is *"Who killed professor X?"*: a book popularizing mathematics by telling anecdotes about famous mathematicians casted in a detective story presented as a graphic novel, with a few high-school level exercises for the reader to solve, and an appendix giving more details about the lives of these mathematicians and about the mathematics involved in the story. A good idea? In principle, yes. Unfortunately, it does not work (at least, it does not work in this book).

The first problem is that this is not a graphic novel: this is a written story with illustrations on the side. In a (good) graphic novel, text and pictures should complement each other: the pictures should add something that is not in the text, and the text should not describe what is depicted in the pictures. Here instead the text tells all: one can read the book aloud to another person without showing the pictures, and the other person will understand practically everything. Indeed, most of the pages are full of talking heads and/or captions telling the story, while the pictures limit themselves to show what already is told in the text or to provide some kind of background for the talking heads. ["Never use talking heads!" is the first rule taught in Graphic Novel Writing 101…] The artist is (painfully?) aware of this problem, and desperately tries to make something happening in the pictures too… up to recurring to awkward tricks such as the one used in p. 42, where for more than half of the page the talking heads are out of focus in the foreground while we see (in focus) a boat slowly passing from left to right in the background. And no, the boat has nothing to do with the story nor adds anything to our understanding/enjoyment of the book.

But what about the story itself? In short: a famous mathematician, Professor X, is found dead in his hotel; the suspects are several mathematicians lodging in the same hotel; a police inspector, helped by another mathematician called Kurt, interrogates the suspects, with the aim of finding motives for the crime and determining their whereabouts at the time of the murder. During the interrogations we learn a few facts on their lives; finally, the mystery is solved by Kurt in an unexpected way (well, unexpected unless you recognize that Professor X is Hilbert and that Kurt is Gödel… but the average reader is not supposed to know this).

But how the police inspector proceeds in the investigation? Using quite an unplausible argument, based on the average speed of a person walking and the time a waiter left the soon-to-be-dead-mathematician alone, the inspector determines that the murderer at midnight should have been less than 20 meters away from the scene of the crime. So he asks the mathematicians staying in the same hotel how far they were at midnight from the room where Professor X was reading… and they answer by means of high-school problems whose solution is the number of meters they were from that room! The first few problems are of a geometrical nature having at least something to do with the structure of the hotel, but the latter problems lose any pretense of being related to the story (and solving them all you'll find that there was a little crowd just little over 20 meters away from Professor X… and nobody noticed anything unusual. Actually, this last fact is coherent with the solution of the murder). By the way, to check the level of the problems I gave the book to one of my sons, who is in high school and like mathematical problems (but not necessarily mathematics teachers). He was able to solve them all in an hour or so, and confirmed that the difficulty was at the right level: not too difficult, but not too easy either. So at least this part of the book is working as intended.

Ok, the detective story is preposterous and badly conceived, but what about the popularizing parts? Are the anecdotes about the mathematicians well told and interesting enough? Unfortunately, this is not the case. We discover that Descartes went around "always armed and [did] not hesitate to draw his weapon when circumstances require"; that Fermat was "known for his habit of formulating conjectures"; that Galois "from an early age […] could grasp the ideas of the great mathematicians, which made him arrogant", and so on. We do not see them act or live; their stories are simply summarized by a talking head (usually Kurt's).

But the major complaint I have is that in several crucial instances the anecdotes are not versions of historical facts simply adapted to fit with the time setting of the story; they are instead completely fictional. For instance, Carathéodory and Hilbert never quarreled; and Riemann did get the position at Göttingen. But in my opinion the worst one is the "story" of Sophie Germain. Her "testimony" is the longest in the book, and it tells the tale of a woman who, to study and do research in mathematics, had to pretend to be a man, using the *nom de plume* of M. LeBlanc. Up to here the account follows what actually happened. The historical Sophie Germain started corresponding with the famous mathematician Gauss; the fictional Sophie Germain started corresponding with the famous mathematician Professor X. When Gauss discovered that M. LeBlanc was actually a woman, he wrote a letter that has done a lot of good for the furthering of women in mathematics and science, accepting her as she was and as somebody that "must have the noblest courage, quite extraordinary talents and superior genius." Instead, Professor X, after discovering that M. LeBlanc was actually a woman, recants his previous positive judgments and publicly declares her inferior because of her sex. So a well known positive fact in the history of mathematics becomes a negative trait in this particular story.

Of course, these changes have the aim of providing a motive for the murder, and they would be acceptable in a (better plotted) standard detective novel. But in this book the detective story is just a pretest; the aim is the popularization. The author says in the foreword that the book is "based on actual incidents, and its heroes are real people who left their mark on the history of mathematics." So the reader is led to believe that what s/he will read had actually happened, maybe in a different time frame or with different people involved, whereas this is not the case. The appendices try to set the story straight, correcting the factual mistakes introduced in the story, but how many readers will actually read the appendices? Not many, I'm afraid (my son did not, for instance); and so most reader will be left with the impression that mathematicians are a bunch of sexist, arrogant, quarrelling people, and that mathematics consists in solving artificial problems in preposterous settings.

Post scriptum. Who did it? Well, "The truth killed Professor X!" [I couldn't resist quoting this, because the ending is the only part of the book that I liked. Not enough, too late, but for the sake of the, indeed, truth, I had to mention it.]