

Mathematician asks: is our history wrong?

Dates ascribed to ancient events may be off by 1,000 years

Book examines conclusions of controversial Russian

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A chance meeting in Mexico and a casual conversation over lunch led Florin Diacu to an intellectual puzzle that has fascinated him for the past eight years and is the subject of his stimulating new book.

A mathematics professor at the University of Victoria, Diacu was at the resort of Cocoyoc to attend a conference of mathematicians from three continents when he heard about the work of a Russian colleague, Anatoli Fomenko. The Russian was applying mathematical tools to try to verify when things happened in ancient history and found that many of the traditionally accepted dates are off by centuries, in some cases by an entire millennium.

In *The Lost Millennium: History's Timetables Under Siege*, just published by Knopf Canada, Diacu closely examines Fomenko's wide-ranging work, which is based on statistics, celestial mechanics and the position of the stars and planets recorded at the time of key historical events. Because the paths of planets occur in different planes, millions of variations are possible in their relative positions. In effect, every night is unique.

Among other sources, Fomenko and his team of researchers consulted Egyptian horoscopes carved in stone, which showed configurations of the night sky that appeared much later than the dates attributed to them.

"We thought the years of the Middle Ages and antiquity were ironclad, but obviously they are not," says Diacu, a compact bearded man with a gift for framing complex ideas in ways anyone can understand. "Nobody questions the past 500 to 600 years. We have enough data to know everything is correctly dated."

Diacu was a brilliant young math teacher at a high school in Romania, then under the boot of the dictator Nicolai Ceausescu, when an invitation to present a paper at a mathematics conference in France in 1988 allowed him to leave the country for up to a month. He never returned.

"They would not let me take my Ph.D. in Romania," he recalls. "I was not politically correct."

At the University of Heidelberg in Germany, where he settled, he completed his Ph.D. in six months while worrying about the family he left behind.

"I was married and had a child who did not get out till after the revolution in late 1989, when they joined me in Germany."

In 1990, the family immigrated to Montreal where the multilingual Diacu obtained a research position at the Centre de recherches mathématiques. A year later, the University of Victoria offered him a professorship. His first book, *Celestial Encounters*, was about chaos theory, but his interests, like those of Fomenko, go well beyond mathematics.

According to Fomenko, the Middle Ages did not last 1,000 years, during which human progress ground to a halt, but more like two centuries.

"The calendar we have today was introduced by Julius Caesar (modified by Pope Gregory XIII in the 16th century). When Caesar lived is another question. According to Fomenko, he lived about 1,000 years ago. Tradition says it was 2,000."

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Florin Diacu, author and mathematician

Is he right?

"I wish I knew the answer," says Diacu, who ends his book with a question mark.

He has deliberately avoided meeting the Russian mathematician, instead only reading his work in learned journals and books. "We've had some email exchanges, with him and with people in his group," Daicu says. "Fomenko is a quite charismatic personality I've heard, and I didn't want to be influenced by that."

Diacu is open-minded without being credulous.

He subjects Fomenko's work to rigorous criticism but applies the same skeptical eye to the calculations made in the 16th century by the French philologist Joseph Scaliger, later a professor at the University of Leiden in Holland, who founded the science of historical chronology.

"He analyzed about 50 calendars, none of which are in use any more," Daicu explains. While some eminent scientists such as Sir Isaac Newton and Johannes Kepler disagreed with some of his datings, Scaliger's chronology underlies the work of historians to this day.

How then, can we arrive at accurate chronology? "One way of doing it is to use radio carbon dating (of documents), to use scientific dating in a scientific way: take many measurements, do statistical analysis and draw the right conclusions," he says.

He is exasperated by the tendency he has noted of archaeologists and historians to use carbon dating only to support conventional chronology. "Historians discard measurements they don't like," he says. "I've talked to many historians and most trust the existing chronology. If you change the chronology, a complete new interpretation of documents is implied."

In *The Lost Millennium*, Diacu recounts his attempts to obtain a fingernail-sized fragment for radio carbon dating from an ancient

copy (no original exists) of Thucydides's *History of the Peloponnesian War*.

This history of the war between the city states of Athens and Sparta, whose start Scaliger dated to 431 BC and Fomenko 1039, is a key document in the chronology debate, because it describes three verifiable eclipses during the conflict. If there are copies of Thucydides's account that are more than 2,000 years old, then Fomenko's date for the war is obviously wrong.

Diacu discovered that the State University library in Hamburg, Germany, houses a papyrus copy of Thucydides's history, which historians have dated back to the third century B.C. by paleography, the study of writing ("not a real science," says the author). But his request to have it carbon dated at his own expense was met with a firm "no."

"I can't do it alone," he says, referring to the research needed to settle the debate. "I need funds, I need the support of historians." One historian who is already onside is Anthony Grafton, professor of European history at Princeton, who praises Diacu's book in a back cover blurb.

"I haven't got very far organizing a team of scholars and experts. A multi-disciplinary group is needed. I'm hoping this book is a way to start. The point of the book is not to say that the old chronology is wrong but that there is no proof."