

**MAA Session on Putting a Theme in a History of Mathematics Course
Joint Mathematics Meetings
Baltimore, Maryland**

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**Giuseppe Peano and Writing
in a History Course**

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Retiring gradually around 2003,

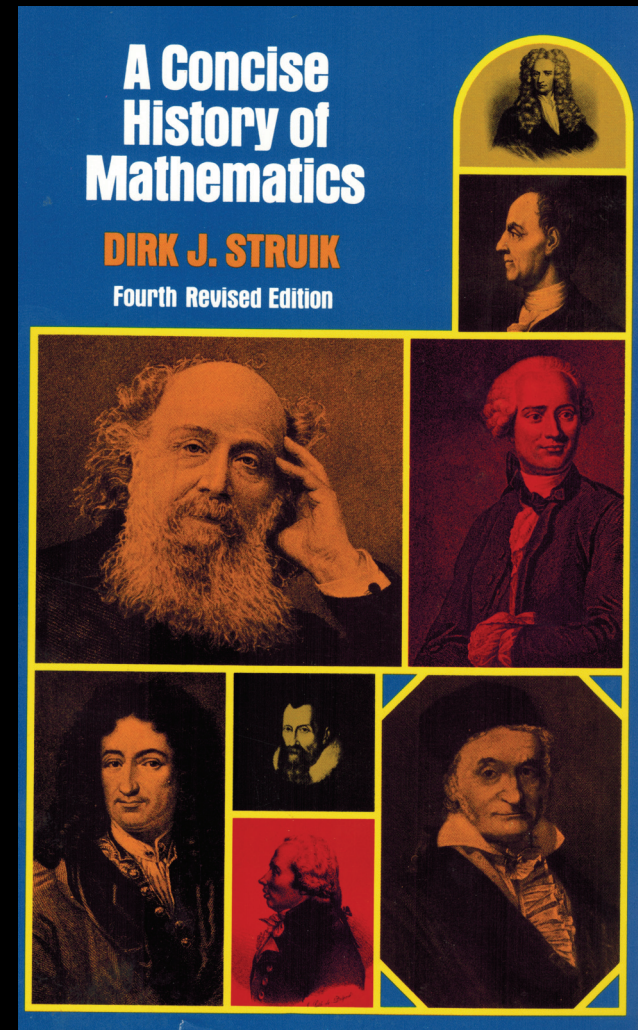
- **switched full-time to history of math, then**
- **taught that course 3 times.**
- **Aimed at junior math majors, its**
- **prerequisite was calculus.**

Students: ≈ 15 , then ≈ 20 , then = 30 (2009).

- **2009: mathematically naive credential students displaced most majors.**

The main text:

- Inexpensive!
- Lectured on parts of it.
- Tried to emphasize its controversial, pioneering aspect.
- Students felt it's too Eurocentric.
- So did Struik!



Two Themes

- **Giuseppe Peano**
- **Writing**

Why Peano?

Peano \Rightarrow nuances now in undergrad. courses:

- **calculus**
- **linear algebra**
- **logic**
- **number systems**
- **numerical analysis**
- **real analysis**

Modest family background

Involved in famous controversies

SFSU's multilingual students:

Peano was prof. of linguistics, too

**I was up on Peano's setting,
and could translate Italian.**

Putting Peano In

**Assigned at the beginning
and end of the course:**

- **Bedtime reading!**
- **Free from Lulu!**

**Discussed some of those
nuances and showed
their origins.**

Hubert Kennedy

PEANO

Life and Works of Giuseppe Peano

Definitive Edition

Peremptory Publications

Concord, CA

2006

Why Writing?

- **The Department requires *some* writing in this course.**
- **I *really believe* in learning about writing!**
- **I was more engaged in writing than other colleagues.**
- **Seemed to me, I was the students' best source for help.**
- **I had some clout.**
- **So *why not* make writing a main emphasis?**

Putting Writing In

- **Almost 100% of grade: 2 major term papers.**
- **Topics chosen by students, with my approval.**
 - ***Hard:* discourage topics based on grade-school and counterculture sources.**
- **Lectured on researching and writing.**
- **Showed draft of 2010 *Monthly* paper on Pieri & Tarski.**
 - **Explained its preparation.**
 - **Reported progress, and referees' caustic comments!**
- **Reviewed 1st term papers in deep detail.**
 - **Professionally copyedited where useful.**

Conclusion

- **2nd term papers noticeably better!**

Some great examples:

- **Newton's circle, especially Wren's reconstructing London after the fire Student: retired SF contractor**
- **Beppo Levi in Argentina Latino credential candidate**
- **How did von Neumann become interested in game theory? Undergrad math major**

The 2009 course was the last, and best, of my career!

**Thank you for
your interest!**

**James T. Smith
Professor Emeritus
San Francisco State University**