

# Recommended Reading

Readers of the AMS *Notices* are kept apprised of many mathematical news items, such as Ingrid Daubechies being awarded the Benjamin Franklin Medal, the changing nature of mathematical publication, and the success of the University of Arizona's Math Center. However, they would not have read here about Nigel Kline's shocking new theory of vertical time, the impassioned public defense of her work on Newtonian Mechanics recently offered by Gabrielle Émilie Le Tonnelier de Breteuil, or the kidnapping of an innocent woman to test a quantitative theory of romantic compatibility by a Harvard graduate with a Ph.D. in mathematics and a Master's degree in human development.

Perhaps that is because these last three are not real events; each is from a recent work of fiction. (In particular, I am referring to *The Ah of Life!* by Banks Helfrich, *Emilie: La Marquise Du Châtelet Defends Her Life Tonight* by Lauren Gunderson, and *Twisted Seduction* by Dominique Adams.)

When I first announced in this publication in 1999 that I planned to compile a list of such works of mathematical fiction, I greatly underestimated the eventual size of this list. The number of entries on my "Mathematical Fiction Homepage" (<http://kasmana.people.cofc.edu/MATHFICT/>) recently reached *one thousand*, and it continues to grow rapidly. Please allow me to use this milestone as an excuse to explain why I think *Notices* readers *should* care about mathematical fiction.

The most obvious reason you should be interested in mathematical fiction is that you are likely to *enjoy* some of it, from the realistic portrayal of math research in Robert Carr's *Continuums* to the completely surrealistic self-referentiality of *How to Live Safely in a Science Fictional Universe* by Charles Yu.

A more serious reason is that fiction can be used as a *tool* for conveying complicated mathematical ideas to nonexperts. Think about Edwin Abbott's 1884 masterpiece *Flatland*, which continues to be used as a way to get people to understand the concept of higher-dimensional geometry. That is just one of many works in which an abstract mathematical concept is objectified into a (fictional) existence. Another technique for making math more accessible through fiction is to simply use the reader's interest in characters and plot to pull them through an otherwise traditional mathematics lesson. This is used quite effectively, for example, in *The Parrot's Theorem* by Denis Guedj.

Representations of math and mathematicians in fiction also offer us a glimpse of how we and our discipline are perceived by others. Occasionally, the image is flattering, such as the brilliant and entertainingly quirky mathematician in *Jurassic Park*. However, a large number of fictional mathematicians are dangerously anti-social and pathetically obsessed with trivial puzzles. To me, the least

appealing image of our profession appears in Sue Woolfe's *Leaning Towards Infinity*. In that award-winning novel from 1996, participants at a math conference interrupt with meaningless objections to prevent speakers from stating their main results, taunt the only female mathematician present with cries of "I see her nipple!", and casually admit that all of the deep theorems of math are actually false.

Finally, the most *important* reason for us to be aware of mathematical fiction is that it not only reflects but actually *shapes* public opinion. To those who doubt this statement and imagine that people are too smart to let their view of reality be influenced by fiction, I offer the following evidence to the contrary:

- Much has been written about the tremendous influence that *Uncle Tom's Cabin* had on the abolitionist movement.
- One can find many biographies of modern astronomers and astronauts which cite "Star Trek" as a factor in their choice of career.
- Having little personal experience with hospitals or the legal system, I admit that my opinions about them are unduly influenced by what I saw on "E.R." and "Law and Order".

Now, consider a talented student choosing a major and a senior legislator voting on funding for math research. These hypothetical individuals are more likely to choose in favor of mathematics if they have taken to heart the TV show "NUMB3RS", whose protagonist successfully applies his remarkable knowledge of mathematics to the capture of criminals, than if their primary source of information on advanced mathematics was *Leaning Towards Infinity*. Since the health of our profession depends upon the decisions of such individuals, we ought to be interested in those things that will affect the outcome.

Some people may simply enjoy reading those misrepresentations of mathematicians that I find so frustrating, and it is not my intention to deny them that pleasure. However, I believe mathematical fiction also provides information about and even influences public opinion, which makes it a useful tool even for those who are not interested in it for their own pleasure. So, I urge you to use my website to familiarize yourself with this body of literature, suggest works to add to the database, consider incorporating some fiction into your courses, and perhaps even write some mathematical fiction yourself. We cannot afford to ignore this important resource, and while you are at it you just might also find something fun to read.

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