The Art of Logic in an Illogical World by Eugenia Cheng
(Basic Books, 2018, 320 pages)

Eugenia Cheng is well known for her previous popular mathematics books *How to Bake Pi* and *Beyond Infinity*. Her latest book seeks to remedy the apparent demise of rationality in modern life by introducing the general public to logical thought.

There are plenty of diagrams throughout the book and the level is appropriate for almost any reader. The book is ideal for non-mathematicians who struggle to make sense of an apparently irrational world of internet memes, fake news, and propaganda. Social justice and equity are constant themes throughout the examples. Indeed, the back cover tells us “Cheng shows us how to use logic and alogic together to navigate a world awash in bigotry, mansplaining, and manipulative memes.”

The book is divided into three long sections: “The Power of Logic,” “The Limits of Logic,” and “Beyond Logic.” Each of these is divided into several chapters. The first section argues for the necessity of logic and rational thought. It covers many of the basic aspects of logic, such as implications, negations, and contrapositives. These are always grounded with plain-English examples. For example, how does one assign blame for the United Airlines passenger-beating scandal? Which factors are relevant and which are irrelevant? The second section, which is the most math-oriented, discusses a few of the seminal puzzles and paradoxes that confronted mathematicians over the years. Hilbert’s hotel, Russell’s paradox, Zeno’s paradox, Gödel’s theorems, and the Prisoner’s dilemma are each touched upon. However, these are necessarily discussed at a superficial level and only hint at the great depth behind these topics. The final section concerns axioms (what are “axioms” for everyday life?), analogies, and the relationship between emotions, intelligence, and rationality. For example, Cheng groups her personal axioms into three main groups: “kindness,” “knowledge,” and “existence” and discusses how these core axioms inform her decisions in everyday life.

Hypatia: the Life and Legend of an Ancient Philosopher by Edward J. Watts
(Oxford University Press, 2017, 224 pages)

Any book about Hypatia of Alexandria is guaranteed to be of interest to the mathematical community, even if its primary focus is not on her mathematical career. Watts, a historian who studies religion and philosophy in late antiquity, devotes only a few pages near the beginning of the book to mathematics. However, he does paint a vivid picture of both daily and intellectual life in the Alexandria of Hypatia’s time. In addition, Hypatia’s philosophical views and teachings are discussed in great detail.

Given the paucity of original sources, it is not surprising that this is a short book. The main text ends on page 155 and the remainder consists mostly of detailed endnotes. The final chapter recounts and reflects upon the various representations of Hypatia that have appeared over the centuries in art and literature. Although the mathematical content of this book is minimal, *Notices* readers will still likely enjoy reading *Hypatia* to learn about the historical Hypatia and the world in which she lived.