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BOOK REVIEWS

IMAGINING NUMBERS

BARRY MAZUR

PICADOR, 2003

\$13.00, 288 pages

Reviewed by Brian Anderson

It is the unspoken dream of many to write a book that will explain their passion and life's work to the world, bringing fame for themselves and for their chosen profession. This dream must be especially acute for those whose chosen profession, such as science or mathematics, has relegated them to utter obscurity and whose work is important but not as glamorous or flashy as they would like. It is with such a desire that Mazur wrote *Imagining Numbers*.

Mazur attempts to raise algebra and geometry into the realm of pop culture. *Imagining Numbers* is intended to open up the world of theoretical mathematics to the reader and to make a connection between works of poetic and literary imagination and those of mathematical thought. The still greater challenge that Mazur attempts is to provide the reader a glimpse into the minds of early mathematicians as they struggled to understand and come to grips with the existence of seemingly improbable, imaginary numbers. While the ideas and intentions are admirable, Mazur's name will not soon be listed beside Sagan or Hawkings in the rolls of science writers who have brought fame to their particular field.

The author's intention is to encourage readers to disregard their knowledge of modern mathematics, regressing so that they may think like early mathematicians. As Mazur states at the beginning of the first chapter, "The aim of this book is not to give a historical account. Rather, it is to re-create, in ourselves, the shift of mathematical thought that makes it possible to imagine these numbers" (p. 11). Mazur would have been better served to stick with a historical accounting of the great mathematical rivalries that are only touched upon and are necessary to understand the minds and thoughts of early mathematicians. As it is, Mazur glosses over some of the most fascinating and engaging historical events to focus on equations. As a result, it is difficult for the reader to connect with or understand the context of those

whom Mazur was seeking to explain.

To help those readers “who may not have actively thought about mathematics since high school, or even during it” (p. xv), Mazur begins by reviewing necessary mathematics vocabulary and guiding the reader through some basic equations and explanations. These first sections, which are interspersed with Mazur’s musings on poetry and the workings of the imagination, are thought-provoking but only vaguely touch on the goal of recreating the thoughts of early mathematicians.

The first chapter of the book also reveals Mazur’s unique style of writing, a very conversational approach, playfully joking with the reader to encourage engagement with the text. Mazur poses numerous questions to the audience, at times promising answers, at times forcing the reader to answer. These techniques are charming to a point, but as the mathematic equations and ideas become more complex and more difficult to understand, the text turns more serious, and the unanswered questions multiply. At one point in the book, Mazur frustrates the reader, devoting an entire paragraph to asking six unanswered questions in a row.

To help the reader better understand the mathematical processes, Mazur breaks the book into easily digestible sections. Each deals with a specific topic or idea, gradually building the reader’s knowledge of algebra to increasingly more advanced levels. Interspersed in the sections dealing with mathematics, Mazur interjects thoughts on imagination and its relationship to literature and the field of mathematics. While this is a successful technique, preventing the reader from becoming overwhelmed with the increasingly difficult equations, often the poetry and literature presented are not sufficiently connected with the mathematics. Mazur can identify the connection but does not express the connection in the book.

Mazur writes with the knowledge that the connections presented are not as successful as intended. Near the end of the book, inexplicably, possibly by way of apologizing to the audience, Mazur relates a friend’s comments regarding an early draft of the book. “Instead of concentrating on the essential story, the emergent understanding of numbers...you have distracted yourself, and confused your text, by describing irrelevant Renaissance pageants” (p. 178). This critique goes on to say that the book is without focus and does not give the insight that Mazur intends to provide.

Mazur’s early editor nails down the problems with the book well. Mazur gets caught in minutia – details on mathematical notation and disputes between mathematicians.

Practically speaking, the book is difficult to read by virtue of the subject matter. Mathematics was not invented to be an easily read narrative. It necessarily jumbles the page and creates awkward, visually unpleasing sentences and pages. Furthermore, the combinations of numbers, symbols, and

words that Mazur must put together to describe the appropriate equations are unwieldy and can be confusing.

Imagining Numbers disappoints in that it has the potential to be a ground breaking and imaginative book on par with those of Hawkings or Sagan. Unfortunately, Mazur never achieves what the book promises. Placing poetry and mathematics side-by-side, Mazur is never able to connect the two for the reader. Nor is Mazur able to provide insight into what in the minds of ancient mathematicians first led them to grasp the idea of numbers that can only be imagined.

Brian Anderson is a teacher currently working with Holy Cross priests in Bangladesh.

HOW MOVIES HELPED SAVE MY SOUL: FINDING SPIRITUAL FINGERPRINTS IN CULTURALLY SIGNIFICANT FILMS

GARETH HIGGINS
RELEVANT BOOKS, 2003
\$13.99, 284 pages

Reviewed by J. Christian Beretta

Reviewing film is a difficult and risky enterprise. As with any art critic, the reviewer is attempting to objectify what is by nature a deeply subjective experience of something created by another. And while no movie review can ever be completely extricated from its author's fundamental visceral reaction, a certain attempt to qualify one's response with some objective feedback is usually expected by the reader.

However, from the opening paragraph of *How Movies Helped Save My Soul*, Higgins admits that the reflections provided will be unapologetically subjective; religious commentary is intertwined with attempts to understand a personal faith journey very much in progress: