



Forms and Functions

IN 1847, Oliver Byrne, “surveyor of Her Majesty’s settlements in the Falkland Islands and author of numerous mathematical works,” wrote and designed an illustrated book so far ahead of its time that, with the exception of a few passé typographical details, it could have been published today. In fact, it *has* been published today, as a stunning boxed facsimile edition. Given its “less is more” layout and primary-color palette — red, blue, yellow, black — **THE FIRST SIX BOOKS OF THE ELEMENTS OF EUCLID: In Which Coloured Diagrams and Symbols Are Used Instead of Letters for the Greater Ease of Learners** (Taschen, \$59.99) prefigures the art and design of 20th-century avant-garde movements. Yet although the illustration on the title page is the spitting image of a de Stijl and Bauhaus design, the mid-19th-century publishing date disqualifies it from being “modern” in the Museum of Modern Art sense of the word. Now, that’s obtuse.

Sure, the book may have one of those lengthy old-fashioned titles, but “The First Six Books of the Elements of Euclid” is so rationalist, minimalist and aesthetically pure, every graphic designer, book lover and math nerd will be as awe-struck as I was. (It comes with a pamphlet containing an essay by Werner Oechslin, an architectural historian and theorist.) In the 1980s, the graphic-design historian Philip B. Meggs introduced me to the book through his illustrated series of articles in *Print* magazine called “Landmarks of Book Design.” Later, at a rare-book fair, when I saw an actual copy, with its vibrant color illustrations of geometric shapes, I decided I had to own an original.

Of course, I would have had to mortgage the house, kids and dog to acquire it; so this facsimile not only satisfies my desire, it is more economical and functional in the bargain. I can actually page through the book without fear or guilt — and if it gets dog-eared, I can buy another.

Every high school student has suffered through Euclid’s fundamentals of geometry, which is why the pragmatic Byrne wrote: “The arts and sciences have become so extensive, that to facilitate their acquirement is of as much importance as to extend their boundaries. Illustration, if it does not shorten the time of study, will at least make it more agreeable.” Lo and behold, he was right. The color symbols — circles, squares, diamonds, etc. — effectively substitute for key words, rebus-style, making comprehension much simpler. By the time the complicated theorems and formulas appear, toward the end of the book, the reader is fluent in the visual language.

“This work,” Byrne continues, “has a greater aim than mere illustration; we do not introduce colors for the purpose of entertainment, or to amuse by certain combinations of tint and form, but to assist the mind in its researches after truth, to increase the facilities of instruction and to diffuse permanent knowledge.”

The time has long passed since I was forced to learn Euclidean geometry, but I believe this masterpiece of beautifully functional book design is so effective it could even help recalcitrant students today — perhaps as an iPhone app.