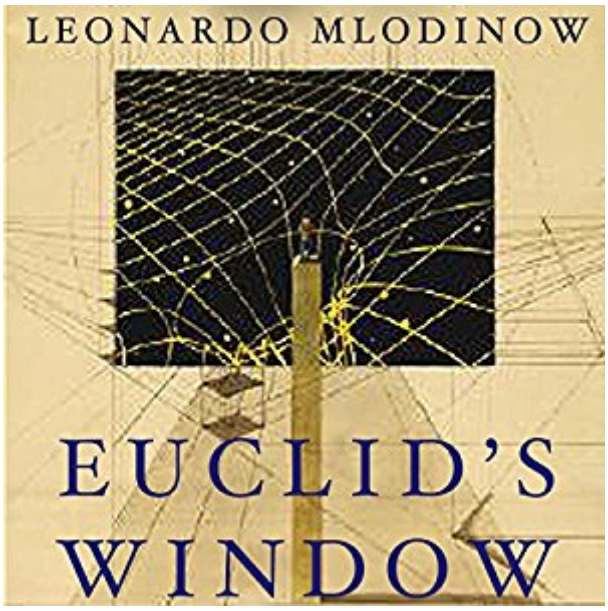
Euclid's Window: The Story Of Geometry From Parallel Lines To Hyperspace



Synopsis

Through Euclid’s Window Leonard Mlodinow brilliantly and delightfully leads us on a journey through five revolutions in geometry, from the Greek concept of parallel lines to the latest notions of hyperspace. Here is an altogether new, refreshing, alternative history of math revealing how simple questions anyone might ask about space -- in the living room or in some other galaxy -- have been the hidden engine of the highest achievements in science and technology. Based on Mlodinow’s extensive historical research; his studies alongside colleagues such as Richard Feynman and Kip Thorne; and interviews with leading physicists and mathematicians such as Murray Gell-Mann, Edward Witten, and Brian Greene, Euclid’s Window is an extraordinary blend of rigorous, authoritative investigation and accessible, good-humored storytelling that makes a stunningly original argument asserting the primacy of geometry. For those who have looked through Euclid’s Window, no space, no thing, and no time will ever be quite the same. --This text refers to the Hardcover edition.

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Customer Reviews

Having taught University Chemistry for many years, this book was great because it gave the back story on the lives of many of the physics/chemistry theory discoverers.Favorite quote: "...This question was settled for good in 1931 by the shocking theorem of Kurt GÃƒâ Ã Â•del: he proved that in a system of sufficient complexity, such as the theory of numbers, there must exist a statement that cannot be proved either true or false...A corollary of

GÃƒâ Ã Â•delÃƒÂ¢Ã â ¬Ã â„¢s theorem is that there must exist a true statement that cannot be proved. This destroys the claims of Russell and WhiteheadÃƒÂ¢Ã â ¬Ã â • not only did they not show how all mathematical theorems can be derived from logic, it is actually impossible to do so!"

"Euclid's Window" traces the roots of particle physics, from the initial geometric work of the ancient Greeks, to Descartes attaching algebra to geometry, to Gauss and Riemann realizing that space need not be flat, to Einstein applying these ideas in the theories of relativity, to the particle physics and string theory as we know it today. These are just a few of the mathematicians and scientists discussed. The book is not a history of geometry as the subtitle suggests, as Mlodinow only takes the parts that are relevant to the current physics-based explanation of the world (membrane theory) and the quest for a grand unified theory and how geometry fits into it. The story along the way is very engaging and entertaining, revealing both the life and times of the people that invented the various theories we use today, as well as lucidly explaining the theories themselves (even string theory). I highly recommend the book for both entertainment value and educational value, though I must qualify this statement: Mlodinow makes a few blunders along the way with dates, fills in some details with his own imagination, and interjects his opinion quite frequently. You might walk away from the book thinking that Ed Witten is the next Einstein (not to discredit Professor Witten, as he has made very important contributions). Mlodinow most noticeably leaves out contributions from the ancient Indians and Chinese, and only briefly mentions the Arabs- basically taking a very Europe- and American-centric point of view...take it or leave it, but I can't help but agree that these are the people that took us from the parallel postulate to quarks, gravitons, and so on. Historical context is cherry-picked to support the anti-Christian and anti-antisemite (basically pro-Jewish) opinions of the author, which isn't to say the points aren't valid. As you will discover in reading the book, Christianity killed (literally) the ancient Greek science, and has impeded the return of logical thought and science ever since.So we don't have complete historic rigor here- I say who cares. Mlodinow has written a story with few geometric sketches and even fewer equations, not a textbook. If you want the usual dry history of "and on April 12, 1652, Hermann von German discovered this phenomena while rowing a boat across a lake," or page after page of equations, then I'm sure there are many other books out there to satisfy your needs. So, take the finer points with a grain of salt (if it sounds too good to be true, it probably is- except for C.F. Gauss) and enjoy the ride of learning about the people behind the math and physics. This is still a great book that I would recommend to those interested in math and/or physics.

Great book, geared for the curious & interested person who may not have a high degree in Mathematics. Very accessible and interesting, easy read, highly recommend.

Leonard Mlodinow is a pretentious narrator, as always (this is not the first text of his that I've read) but as a mathematician and amateur physicist I appreciate the context and chronology he provided in this survey.

Good history of physical mathematics

I enjoyed this, and like to think I understand some of the concepts a it better after reading the text.It's alsoi the first E-book I've read where the foot note system really works, with a clear link to AND BACK from the note.

Leonard Mlodinow is an outstanding scientific populariser. Makes it smooth yet marvelling to glimpse into the world of thought... the evolutions and revolutions of a space-thinking conceptual change. The history of MIND trying to GRASP... SPACE

An interesting read of the history of Geometry from classical Greece up to today's String Theory. You don't need a advanced degree in Math or Physics to enjoy this book and to learn much from it.

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