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Forward by **Anjam Khursheed**

Flatland, written over a century ago, has passed the basic test that measures the worth of every novel; it has survived the passage of time. Not only has it endured, but the grounds for our appreciation of it have considerably grown. Through the portrayal of a strange land, whose inhabitants consist of two-dimensional geometrical figures, Edwin Abbott creates a multi-dimensional allegorical story, which is at once a humorous lesson in geometry, a creative exploration of higher dimensions, a psychological portrait of closed-mindedness, and a religious narrative of millennial revelation.

Flatland is a novel in which the world of mathematics comes to life. To imagine geometrical shapes, endowed with consciousness, moving along a two-dimensional plane, is not so simple as might first appear. There are certain logical problems to be overcome. For example, how do the different two-dimensional characters of Flatland, triangles, squares, and polygons, recognize one another when all they can see are straight lines? Edwin Abbott's resolution of such problems is both entertaining and instructive. He displays meticulous attention to detail, so that his characters can both satisfy two-dimensional geometrical laws, and be seen to experience the joys, sorrows, and perplexities of human life.

The social order of the inhabitants of Flatland is also interwoven with geometry. They are obsessively class conscious, and attempt to create rules and regulations for overcoming the ambiguities of two-dimensional life, while at the same time preserving the status quo. A distinctly successful feature of this book, therefore, is its use of mathematics to heighten social satire.

The author of *Flatland* shows remarkable evidence of anticipating many developments in modern science. by generalizing the rules of geometry from two and three dimensions and applying them to unseen higher dimensions, Abbott correctly surmised that our world is not limited to three dimensions, long before the theory of general relativity demonstrated that there is indeed a higher dimension in which space and time are inextricably linked. Although mathematicians were generalizing the laws of geometry to higher dimensions midway through the nineteenth century, this was only in the form of equations that were not correlated with anything in the real world. new developments in physics continue to point towards the fact that yet more dimensions are "enfolded" into space-time, rather as the third dimension projects itself into a two dimensional Flatland.

There is another equally important aspect to Abbott's description of higher dimensions, and it is essentially a psychological one. We always tend to translate higher dimensions into our own terms, and hence to miss their significance completely. *Flatland* is in this sense a parable about mental blindness, or narrow-mindedness. here we see a dull mental landscape, one that filters out genuine mysteries and is content to

live in terms of known rules, methods and experiences. We are of course familiar with many examples of this attitude, from the hasty rejection of cosmological mysteries by certain secular ideologies, to the narrowness of vision that has afflicted various kinds of religious traditions.

Another aspect of *Flatland* has not yet received much attention. Well known as a science-fiction classic, it is also a religious book about the millennial revelation. The promised Messiah descends into Flatland as a sphere, incarnated in the form of a circle. The sphere comes with the purpose of disseminating "The Gospel of the Third Dimension". A humble square is chosen to be the first apostle, while the priestly class of circles seeks to suppress the new faith and deceive the populace with half-truths and lies. This is a story well known to religious history, but here it is told in parables based in geometry; revelation unfolds in terms of the unbounded dimensions in mathematical space.

Edwin Abbott's training as a schoolmaster in classics and theology no doubt helped him creatively combine the worlds of religion and mathematics. In his study of ancient Greek philosophy, he would have come across the Pythagorean use of a circle to symbolize perfection, the conception of number as a spiritual archetype, and Plato's notion of God as Geometer. His theological studies would have given him a detailed knowledge of the drama of religious revelation. But in *Flatland* he creates something entirely original. By using mathematical space as a metaphor for multi-dimensional spiritual terrain, he has succeeded in capturing the intrinsic depth of religious experience, something all too easily dismissed in our modern age.

How would we respond to the millennial revelation? has the priestly class of our age, both secular and religious, closed our minds to the possibility of another revelation? Do we, in fact, live in a spiritual Flatland? Whatever the answers to these questions, Edwin Abbott's *Flatland* will always be a profound inspiration to those who refuse to live in a world dominated by "limited dimensionality".