

Grant Dahlstrom edition, 1978.

Introduction/Notes by **David W. Davies**

Edwin Abbott Abbott, the author of *Flatland*, was born in London in 1838, the son of a schoolmaster. He attended the City of London School, and entered Saint John's College, Cambridge, in 1857. He was elected a fellow of his college in 1862, ordained deacon in the Church of England in 1862, and a priest in 1863. In the latter year he resigned his fellowship at Saint John's, and about the same time married Mary Elizabeth, the daughter of Henry Rangeley, a coal owner and landed proprietor. The Abbotts had a son and a daughter.

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Abbot is generally regarded as one of the outstanding teachers and headmasters of his time. He placed great emphasis on the study of English literature and more was done, probably, at the City of London School in that subject than was done elsewhere. He made an acquaintance with elementary chemistry compulsory, and he introduced the advanced students to Sanskrit. A distinguished Oxonian ¹ has said that in Abbott's day the City of London School offered better instruction in comparative philology than was available to students at Oxford at the time. As a preacher Abbot was also outstanding. His contemporary, Bishop Percival, declared that "Had Edwin Abbott been able to continue preaching, he would have been the greatest preacher in the English Church." ²

He wrote nearly fifty books and numerous articles. Most of his works were theological, or school books, but he also on Francis Bacon, Cardinal Newman, English literature, and classical subjects. Some of his school books were remarkably successful. There were sixteen editions of *English Lessons for English People*, and twenty-five editions of *How to Write Clearly*. There were also at least twenty-five editions of his *Shakespearian Grammar*. His religious works were of several varieties: popularizations, sermons, Biblical criticism, and three books, very popular in their day, which have been characterized as historical romances, or works of historical imagination. The books were *Philochristus*, *Memoirs of a Disciple of the Lord*, a description of the life of Jesus as it might have appeared to a contemporary disciple; *Onesimus*, *Memoirs of a Disciple of Saint Paul*, describing the spread of Christianity in the time of Paul, and *Silanus, the Christian*, which is concerned with the conflict between Christianity and stoicism.

Through his writings Abbott became involved in a number of controversies. He wrote not only a life of Francis Bacon, but also a book on Bacon and Essex, and he edited Bacon's essays. His interest in Bacon involved him in disputes with James Spedding, the editor of Bacon's works. Being a broad churchman he had no enthusiasm for John Henry Newman. He let that fact become evident in a number of publications, and became involved in controversies with Newman's followers. His Biblical criticism was not accepted by all Biblical scholars. He believed that the original language of the Gospels was Hebrew, whereas many of his contemporaries thought that it was Aramaic. Some thought also that he relied too heavily for support of his Biblical interpretations on the etymologies of Greek words. In his controversial writings he was not at his best—which is true of many.

Flatland first appeared in 1884, and in that same year a revised edition was issued, the text of which is reprinted here. When the book first appeared some found it incomprehensible. The reviewer in *The Athenaeum* admitted that the book "seems to have a purpose, but what that may be it is hard to discover."³ The reviewer also quarreled with the idea that there could be flat objects or creatures which did not have thickness, however infinitesimal. When Roberts Brothers of Boston published an edition in 1885 the reviewer for the *New York Times* was displeased. He thought it "a very puzzling book and a very distressing one. ... Some little sense is apparent in an appeal for the education of women," but other than that he found the work incomprehensible. He concluded that it would be enjoyed "possibly by about six, or at the outside seven persons in the whole of the United States and Canada."⁴ One of those who enjoyed it was the reviewer for the *Boston Advertiser* who found it "an effective satire on social differences and on the assumption of absolute knowledge. ... The geometrical inhabitants of all these regions have social ambitions, immense conceit, positive views in regard to women and education, and in each phase of life there is absolute disbelief in the possibility of anything broader or better. The book is full of light, good natured mockery, and absurd extravagance."⁵

Apparently there have been some who have agreed with the reviewer for the *Boston Advertiser*, and they appear to have been more numerous than the reviewer for the *New York Times* estimated. From 1884 to the present time there have been at least twenty-three editions in English, sixteen of them American editions, presumably read by denizens of the United States and Canada. There was an edition in Dutch in 1920, and one in German in 1929. Not only has there been a wide interest, but the book has interested readers continuously since its publication, for there have been editions in every decade since it first appeared. IF the number of editions appearing is an indication, the work was most popular in the 1920s and the 1950s.

Like Jonathan Swift, Samuel Butler, and others who have described imaginary lands, Abbott employs people and conditions in the mythical regions to point out the shortcomings of mankind and society in his own country. As did his predecessors, he utilizes irony and satire to make his points. Some of Abbott's comparisons have been

remarked with, it is hoped, not too heavy a hand in the shoulder notes. Abbott was concerned also with a problem or viewpoint which he touches on elsewhere in his writings; the fact that the physical universe is understood by man only as far as his senses permit, and his understanding of it might not have any congruence or correspondence at all with its actual nature.

In an actual article, "Illusion in Religion," he observed that we should never be able in this world "to reach fact, indeed, if that means absolute truth. ... For indeed, we see nothing exactly as it is, and hear nothing exactly as it is. There is no such thing as objectiveness in applied science." ⁶ Others, of course, have had similar thoughts. Forty years after Abbott wrote the passage quoted Sir James Jeans declared that "Many would hold that, from the broad philosophical standpoint, the outstanding achievement of twentieth century physics is ... general recognition that we are not yet in contact with ultimate reality. ... Indeed our earth is so infinitesimal in comparison with the whole universe, we, the only thinking beings, so far as we know, in the whole of space, are to all appearances so accidental, so far removed from the main scheme of the universe, that it is, a priori all too probable that any meaning that the universe as a whole may have, would entirely transcend our terrestrial experience, and so be totally unintelligible to us." ⁷ In the article previously quoted, Abbott alludes to one of Bacon's idols; the love of men for symmetrical, well-rounded judgements, and the willingness to accept explanations if they are nicely put together. In this connection it is worth noting an observation of Tobias Dantzig which appeared in the first edition of his *Number, the Language of Science*, but not, perhaps, in the later editions. "The man of science," says Dantzig, "will act as if this world were an absolute whole controlled by laws independent of his own thoughts or acts; but whenever he discovers a law of striking simplicity or one of sweeping universality or one which points to a perfect harmony in the cosmos, he will be wise to wonder what role his mind has played in the discovery, and whether the beautiful image he sees in the pool of eternity reveals the nature of this eternity, or is but a reflection of his own mind." ⁸

It is too bad that Abbott did not live into the time of Kurt Gödel, whose work he would probably have found absorbing. Warren Weaver has observed of Gödel's theorem that "Gödel proved the absolutely stunning result (stunning in all senses) that it is impossible—actually impossible, not just unreasonably difficult—to prove the consistency of any set of postulates which is rich enough in content to be interesting—rich enough, that is, in the sense of leading to a useful body of results. The question 'Is there an inner flaw in this logical system?' is a question which is unanswerable! ... [Gödel] demonstrated that it is always possible, within a logical system, to ask questions which are undecidable!" ⁹ Gödel, then, brought the matter one step further, and it is not unreasonable to summarize Jeans, Dantzig, Gödel, and Weaver by saying that not only is it probably that man has created the physical universe in his own image, that is, according to a limited and inadequate understanding, but he has done so by utilizing a logical system which is bound to have in it contradictions.

Much has been made of the fact that in Flatland Abbott harps on the possibility of lands where the fourth or fifth dimension may exist, and this has been connected with the concept of a time-space continuum, and time as a fourth dimension. Actually there would appear to be no connection between a fourth dimension, as Abbott thought about it, and the consideration of time as a fourth dimension. Abbott's fourth dimension was to be a quantity, or quality, which could be represented geometrically. He says often enough, perhaps too often, that since the arithmetical expressions N^2 and N^3 may be represented geometrically, then there may be worlds where N^4 can be represented geometrically. Nowhere does he allude to time as a fourth dimension. He had the possibilities of time as another dimension well in mind, but was not concerned with them in Flatland. In the article already quoted he observes that "From Hampstead Hill I listen and say, 'Big Ben is just striking one.' It struck twenty seconds ago. When we look up at the Pole Star to-night, if we say, 'It is there,' we shall say the thing that is not. It was there, some forty or fifty years ago. ... In more distant stars, some would be, at this moment, looking at the battle of Waterloo, and wondering whether Blücher would come up in time." ¹⁰

The Athenaeum reviewer pointed out that the inhabitants of Flatland were bound to have some height, however infinitesimal. Abbott was aware of the difficulty and made an effort to get around the objection by saying that in Flatland lines were not lines but beams of light. Lapses, anomalies, and omissions similar in nature to that pointed out by the reviewer can be found in Flatland, but to spend time looking for the defects would spoil the fun. Abbott must have had considerable enjoyment in writing the book. He was one of those who has had fun applying a mathematical way of thinking to literature. The distinguished mathematician, J.J. Sylvester, wrote a treatise on prosody, and in our own day the group known as "Oulipo" applies mathematics to various literary genre. Permutations of a proverb by Harry Mathews, one of the group, was recently published in the Scientific American. Mathew's permutations are for fun, and as the Boston Advertiser reviewer noted, that is the purpose of Flatland.

Footnotes

1 - L. R. Farnell, sometimes Rector of Exeter, in The Times, 18 Oct. 1926, p. 10.

2 - The Times, 13 Oct. 1926.

3 - The Athenaeum, 15 Nov. 1884, p. 622.

4 - New York Times, 23 Feb. 1885. The review is pasted into a copy of Flatland in the Clendening History of Medicine Library of the University of Kansas Medical Center, Kansas City, Kansas. The editor is indebted to Mrs. Bernice D. Jackson, Rare Books Librarian, for a Xerox copy of the review.

5 - A review from the same source as that of note No. 4.

6 - The contemporary Review (Nov. 1890), vol. 58, pp.721-722.

7 - Sir James Jeans, The Mysterious Universe (New York, 1932) pp.150-152.

8 - Tobias Dantzig, Number, the Language of Science (New York, 1930) p. 233.

9 - Warren Weaver, Lady Luck, The Theory of Probability (Garden City, 1963) p. 39.

10 - The Contemporary Review (Nov. 1890), vol. 58, pp. 721-723.