

13D FLATLAND

(by Bill)

Years ago (1884), a mathematician named A.A. Abbott wrote a book called *Flatland* that helped me grasp the dimensionality aspect. Abbott wrote about a world of only two dimensions. You could only move east or west. There was no up or down. The people or creatures there were geometric figures: pentagons, hexagons, triangles, squares, and circles. The number of sides you had determined your rank in society. Circles were the highest. (In the book women were isosceles triangles with sharp points. (I think Abbott was kind of a chauvinist.)

Imagine a vast sheet of paper on which straight Lines, Triangles, Squares, Pentagons, Hexagons, and other figures, instead of remaining fixed in their places, move freely about, on or in the surface, but without the power of rising above or sinking below it, very much like shadows - only hard and with luminous edges - and you will then have a pretty correct notion of my country and countrymen. Alas, a few years ago, I should have said ``my universe"; but now my mind has been opened to higher views of things. In such a country, you will perceive at once that it is impossible that there should be anything of what you call a ``solid" kind; but I dare say you will suppose that we could at least distinguish by sight the Triangles, Squares, and other figures, moving about as I have described them. On the contrary, we could see nothing of the kind, not at least so as to distinguish one figure from another. Nothing was visible, nor could be visible, to us, except Straight Lines; and the necessity of this I will speedily demonstrate. Place a penny on the middle of one of your tables in Space; and leaning over it, look down upon it. It will appear a circle. [1]

A sphere outside the plane of Flatland tries to communicate with one of the Flatlanders, but the Flatlander can't comprehend a third dimension. The sphere drops through the plane of Flatland, but the Flatlander simply concludes that the sphere is a two-dimensional circle with the power to change its radius. The point is that if you are confined to a number of dimensions (such as three, as we are), you tend to oversimplify your concept of a higher-dimensional being (such as God).

One circle had a dream that a sphere could exist and could speak to him from the “up” dimension. That meant that three dimensions actually existed. The sphere lowered itself through the plane of existence, first as a point, then as a wider and wider circle, then back to a point. Finally, the sphere pulled himself above the plane.

The sphere spoke this:

You are living on a Plane. What you style Flatland is the vast level surface of what I may call a fluid, on, or in, the top of which you and your countrymen move about, without rising above it or

falling below it. I am not a plane Figure, but a Solid. You call me a Circle; but in reality I am not a Circle, but an infinite number of Circles, of size varying from a Point to a Circle of thirteen inches in diameter, one placed on the top of the other. When I cut through your plane as I am now doing, I make in your plane a section which you, very rightly, call a Circle. For even a Sphere - which is my proper name in my own country - if he manifest himself at all to an inhabitant of Flatland - must needs manifest himself as a Circle. [2]

Having seen all this, the circle became an evangelist for the third dimension. Flatlanders, however, concluded that the sphere was a two-dimensional circle with the power to change its radius. The point is that if you are confined to a certain number of dimensions (like three) you will tend to oversimplify your concept of a higher-dimensional being (such as God).

We are 3 ½ dimensional beings, three dimensions in space and one dimension (forward only) in time. Time travel introduces a huge paradox. Imagine that you could go back in time and kill one of your ancestors. Then you wouldn't exist now to go back in time.

Different movies pick up on this idea. I think one was called *A Place in Time*. A guy goes back in time and gives a girl a watch. She grows up and later gives it to him.

If God knows what we are going to do, doesn't that mean we have no free will? No, the problem goes back to our three-and-a-half-dimensionality. Perhaps, though, we can get a "feel" for it by going back to our inadequate model for the creation, realizing that it is inadequate, and continue it anyway. It will be something like a Flatlander viewing a sphere as a variable-radius circle.

More on Flatland-

(by Paul)

Abbott's book was a satire on the society of Victorian England, a challenge to stretch one's imagination, and an introduction to apologetics thinking.

The principles of Flatland society were these: [3]

1. A person's character and worth are determined by that person's shape.
2. A person's place in society is fixed at birth, based on their ancestry.
3. Women are the lowest of the low.

The principles of the Enlightened Square are just the opposite: [4]

1. Shape does not completely determine character.
2. Class should not determine opportunity.
3. Women are quite significant.

The men of Flatland are rational, logical beings. For them, seeing is believing. According to the wise men of Flatland, omnividence, which simply means the ability to see all things, is an attribute of God alone. The women proclaim that “feeling is believing” (Abbott 54) and are viewed as emotional and irrational beings as opposed to the men. Due to this perceived lack of rationality, women are not allowed to partake in formal education. They are, however, just, merciful, selfless, and loving beings—divine qualities according to Sphere, a being who visits Flatland from his three-dimensional world. [5]

CS Lewis writes:

(T)he Christian account of God involves just the same principle. The human level is a simple and rather empty level. On the human level one person is one being, and any two persons are two separate beings - just as, in two dimensions (say on a flat sheet of paper) one square is one figure and any two squares are two separate figures. On the Divine level you still find personalities; but up there you find them combined in new ways which we, who do not live on that level, cannot imagine. In God's dimension, so to speak, you find a being who is three Persons while remaining one Being, just as a cube is six squares while remaining one cube. Of course we cannot fully conceive a Being like that: just as, if we were so made that we perceived only two dimensions in space [like Flatlanders -- ed.] we could never properly imagine a cube. But we can get a sort of faint notion of it. And when we do, we are then, for the first time in our lives, getting some positive idea, however faint, of something super-personal --something more than a person....[6]

*Even more, we understand pictures only because we know and inhabit the three-dimensional world. If we can imagine a creature who perceived only two dimensions and yet could somehow be aware of the lines as he crawled over them on the paper, we shall easily see how impossible it would be for him to understand. At first he might be prepared to accept on authority our assurance that there was a world in three dimensions. But when we pointed to the lines on the paper and tried to explain, say, that “this is a road,” would he not reply that the shape which we were asking him to accept as a revelation of our mysterious other world was the very shape which, on our own showing, elsewhere meant nothing but a triangle. And soon, I think, he would say, “You keep on telling me of this other world and its unimaginable shapes which you call solid. But isn’t it suspicious that all the shapes which you offer me as images or reflections of the solid ones turn out on inspection to be simply the old two-dimensional shapes of my own world as I have always known it? Is it not obvious that your vaunted other world, so far from being the archetype, is a dream which borrows all its elements from this one?” (Lewis, *Weight of Glory* 79) ...*

And the skeptic’s conclusion that the so-called spiritual is really derived from the natural, that it is a mirage or projection or imaginary extension of the natural, is also exactly what we should expect, for, as we have seen, this is the mistake that an observer who knew only the lower medium would be bound to make in every case of Transposition. The brutal man never can by

analysis find anything but lust in love; the Flatlander never can find anything but flat shapes in a picture; physiology never can find anything in thought except twitching of the grey matter. It is no good browbeating the critic who approaches Transposition from below. On the evidence available to him his conclusion is the only one possible. (Lewis, Weight of Glory 81) These same ideas find their way into Lewis' children's fiction also. [7]

(L)et me suggest that the Sphere corresponds to Jesus Christ in the Incarnation. The Sphere descends into Flatland from his own world just like Jesus came from heaven to live on the earth. Jesus was perfect, and combined two natures, human and divine, in one person. The Sphere was "a more perfect Circle than any in Flatland"; in fact, he was "many Circles in one." The Sphere has a mission. As he descends into the High Council of Circles, he cries, "I come to proclaim that there is a land of Three Dimensions." His intent in revealing himself to A. Square was to make him "a fit apostle for the Gospel of the Third Dimension". This is analogous to Jesus coming to preach the Gospel of the Kingdom of God, and choosing twelve apostles to help him.

Recall how Jesus was able to join His disciples in a locked room after His resurrection. A. Square alludes to this event when he says to the Sphere, "I ask, therefore, is it, or is it not, the fact, that ere now your countrymen also have witnessed the descent of Beings of a higher order than their own, entering closed rooms, even as your Lordship entered mine, without the opening of doors or windows, and appearing and vanishing at will?" After the Sphere ascends out of the Council meeting, everyone present is killed, imprisoned or sworn to secrecy about the event. This is similar to the way the chief priests acted after the resurrection of Jesus. [8]

Lunsford adds:

The men of Flatland are rational, logical beings. For them, seeing is believing. According to the wise men of Flatland, omnividence, which simply means the ability to see all things, is an attribute of God alone. The women proclaim that "feeling is believing" (Abbott 54) and are viewed as emotional and irrational beings as opposed to the men. Due to this perceived lack of rationality, women are not allowed to partake in formal education. They are, however, just, merciful, selfless, and loving beings—divine qualities according to Sphere, a being who visits Flatland from his three-dimensional world. [9]

References

1. Abbott, A., *Flatland*, Warbler Classics, 2019.
2. Ibid.
3. Stangl, W., and Carlson, D., *Drawn to Infinity*, Biola University course notes, (2012).

4. Ibid.
5. Lunsford, M., "Dialogue between Dimensions: The Communication Dilemma in Flatland," *Journal of the Union Faculty Forum*, Vol. 32 (2012).
6. Lewis, C. S., *Mere Christianity*, Macmillan, 1960, p. 141-142.
7. Howell, R. W., and Bradley, J., *Mathematics through the Eyes of Faith*, Harper One, 2011, p. 23.
7. Stangl and Carlson, op. cit.
8. Lunsford, op. cit.