

Stuck in Flatland? Doug Hayhoe, February 2025

Physical and spiritual realities intersect, with evidence for faith. Unless you're stuck in Flatland.

Edwin Abbott was an English schoolmaster who died in 1926. He is best known as the author of a book called [Flatland](#), published in 1884. In the book, as [one summary](#) puts it, “Abbott created a two-dimensional world populated by various polygons as a satire of the social hierarchies of Victorian culture. In the world of Flatland, the more sides you have the higher your social status.” The two-dimensional triangles, squares, and pentagons don’t go through each other, but travel around each other, just as in our three-dimensional world, keeping their size and shapes.

The author, Abbott, put himself in the story, as a square. His smart son, however, was a hexagon! Part 1 of Flatland describes the functioning of this elite two-dimensional society. Then, in Part 2 something unusual happens. The author, along with other two-dimensional creatures, encounters something they can’t understand: a circle that changes size right in front of their “eyes.” It begins as a dot, then turns into a circle that first expands, then shrinks, and disappears again. This confounds all their experience about how two-dimensional reality works.

What is really happening is this: their Flatland was just a two-dimensional plane immersed in a three-dimensional reality. A sphere in this broader world is moving through space towards the plane. Picture a soap bubble (Figure 1a). When it first touches the plane, all that the two-dimensional squares and pentagons see is a dot. But as the sphere slowly moves through the plane, a circle appears, getting larger until the sphere is halfway through (Figure 1b). Then, after that the circle shrinks and finally disappears completely as the sphere moves out of the plane. It was impossible for two dimensional creatures to understand what was happening.

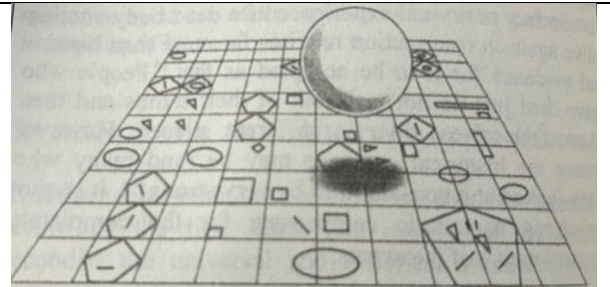


Figure 1a Sphere above the plane (Houghton, p. 140).

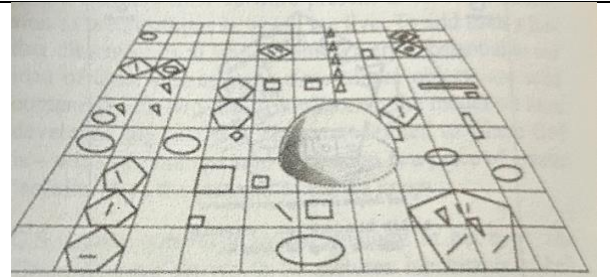


Figure 1b Sphere passing through (Houghton, p. 122).

Flatland, Mere Christianity, and Climate Science

Edwin Abbot himself did not apply his Flatland fantasy to spiritual realities. But several of his fellow countrymen did. The well-known writer and Christian apologist, C S Lewis, “[alludes to ... Flatland to help him convey meaning to some of his most challenging subjects, including ... the interactions between the material and spiritual world in \[his book\] *Miracles*.](#)” Lewis’s most famous book, [Mere Christianity](#) (1952), was instrumental in leading several prominent scientists such as Francis S Collins [who initially did not believe in miracles] to become Christians.

Another fellow countryman of Abbot’s who alluded to Flatland in his writings on science and faith was Sir John Houghton. He was a co-founder of the IPCC and was sometimes referred to as “the grandfather of climate scientists.” (See my essays, [Contemporary Scientists who Believe.](#)) When people learned that Houghton was both a scientist and a Christian, they often asked him

questions about how the two realities interact. If the atmosphere is completely governed by the laws of physics, for example, why should farmers pray for rain?

To answer this kind of question, Houghton wrote [*The Search for God: Can Science Help*](#) (Regent, 1995; 2007). It's not an easy read; just as his major scientific textbook, [*The Physics of Atmospheres*](#) (CUP, 2002), is not easy to digest, even if you have a degree in physics! But the *Search for God* is the most careful and thorough book I know of that discusses how the material and spiritual dimensions interact. In what follows, I will just scrape the surface of this subject.

How the spiritual dimension intersects the physical dimension

Houghton refers to *Flatland* halfway through his book, *The Search for God*. After discussing the four dimensions of space and time (x, y, z, t) in chapter 8, he introduces the idea of a fifth dimension. This is where the existence of a personal God, the value of prayer, and the evidence of miracles comes in. Even here, however, Houghton uses strong scientific analogies to describe how this works, such as quantum theory and the wave-particle duality.

Here's how I see it. Christianity claims that the spiritual dimension intersects the physical in many ways. In the Old Testament, prophets spoke God's message to people by the Holy Spirit ([2 Pet. 1:21](#)). In the New Testament, the spiritual intersected the physical in the person of Jesus. The people said, "no one ever spoke the way this man does" ([John 7:46](#)). Jesus' claims about himself – that he came from heaven, that he is God's unique Son, that people must believe in him to come to God (see my episode [The Greatest Book Ever Written](#), for many other claims) – can only be explained by believing that he really is divine (Figure 2).

"The really foolish thing that people often say about Him [is this]: 'I'm ready to accept Jesus as a great moral teacher, but I don't accept His claim to be God.' That is the one thing we must not say. A man who said the sort of things Jesus said would not be a great moral teacher. He would either be a lunatic — on a level with the man who says he is a poached egg — or else he would be the Devil of Hell. You must make your choice. Either this man was, and is, the Son of God: or else a madman or something worse."

Figure 2 C S Lewis puts it this way, in *Mere Christianity*

A third way that the spiritual intersected the material was through miracles. Houghton explains them this way. Type 1 are miracles of timing. No scientific law is broken. But, for those in touch with a Personal God who controls all dimensions, they are not just a coincidence. Type 2, on the other hand, are ones that "a scientific observer (if present with appropriate equipment) would have concluded were scientifically anomalous and not in agreement with known scientific law" (p. 176). Jesus' miracles are an example of Type 2. For many, they're difficult to believe, just as the sphere passing through Flatland was difficult to accept by the two-dimensional beings there.

The greatest miracle of all was Jesus' resurrection. His disciples were with him on his last day, at the cross. They *knew* he had died. But three days later, they visited the tomb and found it empty. He then appeared to them and let them touch the nail marks in his hands and feet, made by the cross. This changed their lives, and that of 500 other people who saw him then ([1 Cor. 15:6](#)).

Now we know that people will die for a wrong idea. But it's hard to find people to give up their life for something they *know* is wrong. Yet all of the disciples except John gave up their lives for Christ, and they of all people would have known if Christ didn't really rise from the dead.

How the physical dimension intersects the spiritual dimension

Jimmy Carter lived the longest of any president of the United States. It was fascinating to see so many other presidents and leaders attending his recent funeral. While people differ as to the effectiveness of his actual presidency, no one questions his dedication to helping many different beneficial causes in the decades following his being in office.

Another thing unique about Carter was his lifelong commitment as a Christian. As one of his grandsons pointed out at his funeral, he was still teaching a Sunday School class in his 90s. Carter himself attributes this spiritual dimension of his life to a unique event that happened at a critical time. In his own words, he was “born again.”



Figure 3 Nicodemus visiting Christ. 1899 painting. Nicodemus (left) talking to Jesus. by Henry Ossawa Tanner (public domain)

Jesus introduced the term “born again,” when the Jewish leader Nicodemus visited him one night (Figure 3). The story is told in [John 3](#). Jesus abruptly welcomed him by saying, “unless a person is born again, he cannot enter the kingdom of God.” He then qualified this by saying that he was referring to a new spiritual birth. He also made it clear that the way to be born again was to believe that God loved us and sent his Son to die for us. Nicodemus did that. So did Jimmy Carter, and many other millions of people throughout history.

So, the first way creatures from the physical dimension (i.e., ourselves) intersect the spiritual is by *believing*. John uses this verb 100 times in his Gospel. And the apostle Paul uses the equivalent noun *faith* 130 times in his letters. When our hearts and minds are open to

another dimension of reality, where God dwells, we see the evidence of how the spiritual has invaded the physical world (i.e., Jesus’ miracles, his life, death, and resurrection) *and we believe*.

The physical dimension also intersects the spiritual dimension when we pray. Houghton devotes chapter 12, the longest chapter of his book, to this topic. How can it be that our prayers can alter the future? If everything is determined scientifically, in a physical universe, what can a person’s prayers do? Yet God invites us to pray to him in Jesus’ name. Houghton’s ideas on this topic are profound enough to merit another essay just on prayer. ([His chapter on prayer is available here.](#))

In fact, there are many ways that believers can transcend the physical dimension of life. They can learn to love their enemies, through the power of God’s Spirit, just as Jesus loved his enemies, when he said on the cross, “Father forgive them, for they don’t know what they’re doing” ([Luke 23:34](#)). They can have the confidence that there is eternal life at the end, as Jesus promised ([John 10:28](#)). This is their certain hope. As the apostle Paul says, and now abide faith, hope, and love.

No book better expresses the spiritual intersecting the physical, and the physical intersecting the spiritual, than John’s Gospel. Part 1 is structured around the miracles and claims of Christ. Part 2 then focuses on what happens when we believe. We love, pray, know, and witness. Part 3 culminates with the cross and resurrection. My essay [The Greatest Book ever Written](#) gives a brief introduction to the themes of John’s Gospel. But you should read the Gospel for yourself!