

A story told by Cornell University mathematician Steven Strogatz in an interview with Wired in 2012:

“ In my first science class in high school, our teacher, Mr. diCurcio, asked us all to measure the period of a pendulum, the time it takes for the pendulum to swing back and forth. He gave each of us a little pendulum and a stopwatch. The pendulum could be lengthened or shortened in discrete clicks, and our assignment was to set the pendulum to a certain length, and then let it swing 10 times back and forth, meanwhile timing how long it took to make those 10 swings. Then we were supposed to repeat the measurement for pendulums of different lengths, and to plot our results as dots on a piece of graph paper, with the length of the pendulum on the  $x$ -axis and the time required for 10 swings on the  $y$ -axis. It was intended as a lesson in how to use graph paper, but it became clear to me after plotting the fourth or fifth dot that a pattern was emerging. The dots were falling on a curve. I recognized its shape because I'd seen it in algebra class. It was a [parabola](#) — the same shape that water makes when it comes out of a drinking fountain. I felt a peculiar chill, an enveloping sensation of fear and awe: *this pendulum knows algebra!* In that moment I suddenly understood what people meant by “laws of nature.” It was a moment from which I've never really recovered. It felt like I was being let in on a secret. There were beautiful, hidden patterns in the world, patterns you couldn't see unless you knew math.”