

Why? What makes us curious?

Mario Livio

Mario Livio is a quite well-known scientist, an astrophysicist. He is intrigued by the mysterious factor that has driven the great scientists throughout the ages – curiosity.

Curiosity does not correlate extremely strongly with any other particular skill. Livio points out that two of the most curious people of all time, Leonardo da Vinci and Charles Darwin, were by their own admission not very mathematically gifted. On the other hand Einstein, Richard Feynman and Isaac Newton were mathematical prodigies.

One common thread that he points to is the ability to visualize a problem. Leonardo's curiosity arose out of his work as an artist. He wanted to depict the human body, water, waves and light accurately. To do so he pursued an insatiable curiosity about the factors that influence their appearance. Richard Feynman was not a skilled artist, but he was an inveterate doodler, renowned for his "Feynman diagrams" to explain what was going on in the world of subatomic particles.

A second common thread was that they were curious about everything. Feynman's colleague Murray Gell Mann was exasperated because Feynman would let himself go off on so many tangents that he seemed not to focus on his work. They make delightful reading in his biographies. He learned to play the frigidora so he could march in the carnival band in Rio de Janeiro. He learned how to crack safes so he could get his hands on classified documents when he was working on the Manhattan project. He taught himself and obscure Asian language, Tavu if memory serves, from the inaccessible heart of the Soviet Union simply because he was fascinated by the people and wanted to travel there.

This is the third book I have read on related themes just in the past couple of months. It is worth mentioning the other two because they are so unique. The Evolution of Beauty talks about bird evolution, and then delves into human evolution through sexual selection. Sexual selection, in turn, was driven, as the title suggests, by our sense of beauty. In particular, women exercise a great deal of choice, it appears, in our evolution and their preferences may have led us to become artists, musicians, and ultimately to develop the power of speech.

The second one, even more closely related, is the evolution of imagination. Although neither author delves into the relationship, imagination and curiosity are intricately connected. Both authors talk about fMRI imaging to see what was going on in the brain. Both discuss psychological tests designed to tease out the brain functions behind imagination and curiosity, respectively. The author of the imagination book has some satisfying material on the evolutionary explanation of imagination.

I recommend all three books highly. Each of them has very useful insights into how we have evolved to be the way we are, how unique we are in the animal kingdom, and how recently we came into these magnificent faculties.