

NOTES FROM: *The Demon-Haunted World*, by Carl Sagan

SUMMARY: The astrophysicist Carl Sagan was one of my favorite people *ever*, and I owe a lot of my gratitude for being alive *directly* to him and his books. *Cosmos*, *Pale Blue Dot*, *Billions and Billions* - all those books and more have been massively influential when it comes to shifting my worldview (my *galaxy-view* haha), and Sagan was one man who *knew* how to think critically. That's what this book is about.

More specifically, *The Demon-Haunted World* is about charlatans, lies, pseudoscience, forgeries, hoaxes, and more, and about how we can identify them, protecting ourselves against their negative, insidious influences.

The book is tightly argued and wise, and Sagan's generous view of humanity and its potential survives to the very last page - even after describing, in great detail, all the various ways we've been deceived over the millennia, by ourselves and by others. There are many, *many* false paths we can all wander along, and numerous falsehoods that even smart people are susceptible to believing, but with Carl Sagan's help, you'll be prepared to bring your critical faculties to bear on every situation and get closer to the truth.

"Science is not only compatible with spirituality; it is a profound source of spirituality. When we recognize our place in an immensity of light-years and in the passage of ages, when we grasp the intricacy, beauty, and subtlety of life, then that soaring feeling, that sense of elation and humility combined, is surely spiritual. So are our emotions in the presence of great art or music or literature, or acts of exemplary selfless courage such as those of Mohandas Gandhi or Martin Luther King, Jr. The notion that science and spirituality are somehow mutually exclusive does a disservice to both."

MK: The vibrations of sound can be visualized and become pictures, and light can become sounds, as we can convert them into electrical signals and then map those signals to sound frequencies. All of reality is waves, and consciousness is the great translator.

"There is a joy that comes to those with the privilege of finding out a little bit about how the universe works."

"Advances in medicine and agriculture have saved vastly more lives than have been lost in all the wars in history."

"Self-knowledge is the only antidote to maladaptive behaviors."

"The universe is tens of billions of light years across, as well as being billions of years old."

"So little of what we now know about science has been predicted by religion."

“Science is an attempt, largely successful, to understand the world, to get a grip on things, to get hold of ourselves, to steer a safe course. Microbiology and meteorology now explain what only a few centuries ago was considered sufficient cause to burn women to death.”

“There are wonders enough out there without us having to invent any.”

“New information about the universe could come at any time, even tomorrow.”

“Those who are not afraid of monsters tend not to have descendents.”

“Once you give a charlatan power over you, you almost never get it back.”

“I still miss them very much, and part of me still wants to believe that they are alive somewhere and that they are okay.”

“Children are exposed to 100,000 acts of violence before they leave elementary school.”

“An extraterrestrial being, newly arrived on Earth - scrutinizing what we mainly present to our children in television, radio, movies, newspapers, magazines, the comics, and many books - might easily conclude that we are intent on teaching them murder, rape, cruelty, superstition, credulity, and consumerism. We keep at it, and through constant repetition many of them finally get it.”

“The mind is how we perceive what the brain does.”

“Nothing is too wonderful to be true.”

“There are naive questions, tedious questions, ill-phrased questions, questions put after inadequate self-criticism. But every question is a cry to understand the world. There is no such thing as a dumb question.”

“Books, purchasable at low cost, permit us to interrogate the past with high accuracy; to tap the wisdom of our species; to understand the point of view of others, and not just those in power; to contemplate - with the best teachers - the insights, painfully extracted from Nature, of the greatest minds that ever were, drawn from the entire planet and from all of our history. They allow people long dead to talk inside our heads. Books can accompany us everywhere. Books are patient where we are slow to understand, allow us to go over the hard parts as many times as we wish, and are never critical of our lapses. Books are key to understanding the world and participating in a democratic society.”

“Nothing is touching anything - there is just the interaction between electric fields.”

“The SETI Program would have cost one attack helicopter per year.”

“This civilization is our nationality.”

“Let us temper our criticism with kindness. None of us comes fully equipped.”

“Put scientists in a room together, working on the same thing but in different languages, and they will find a way to communicate.”

Thomas Jefferson: “The cost of education is trivial compared to the cost of ignorance.”

“The cure for a fallacious argument is a better argument, not the suppression of ideas.”

“If the citizens are educated and form their own opinions, then those in power work for us. In every country, we should be teaching our children the scientific method and the reasons for a Bill of Rights. With it comes a certain decency, humility, and community spirit. In the demon-haunted world that we inhabit by virtue of being human, this may be all that stands between us and the enveloping darkness.”

“For me, it is far better to grasp the Universe as it really is than to persist in delusion, however satisfying and reassuring.”