

Curious Minds: How a Child Becomes a Scientist

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What makes a child decide to become a scientist?

- •For Robert Sapolsky–Stanford professor of biology–it was an argument with a rabbi over a passage in the Bible.
- •Physicist Lee Smolin traces his inspiration to a volume of Einstein's work, picked up as a diversion from heartbreak.
- •Mihaly Csikszentmihalyi, a psychologist and the author of *Flow*, found his calling through Descartes.

Murray Gell-Mann, Nicholas Humphrey, Freeman Dyson . . . 27 scientists in all write about what it was that sent them on the path to their life's work. Illuminating memoir meets superb science writing in stories that invite us to consider what it is—and what it isn't—that sets the scientific mind apart.

Curious Minds: How a Child Becomes a Scientist Details

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From Reader Review Curious Minds: How a Child Becomes a Scientist for online ebook

Susan says

I love the concept of this book, but I wish the author would have branched out more into the other types of scientists than physicists. I'm also finding that if you want to be famous in science, you need to come from a lot of money, have parents that are incredibly hands-off, and you need to grow up in England.

Becky Shattuck says

The idea behind the book is an interesting one: ask a bunch of scientists to write about what kind of experiences they had as children that helped propel them into their field. The final product, though, generally fails to impress.

I was very disappointed in the first third of this book. Almost all of these first essays were from men, and a lot of them really only talked about working with actual scientists as children. One man helped his grandfather in the lab. Another came from a lineage of scientists and doctors. Some heard their parents talk about their research at the dinner table. As I'm reading these, I'm thinking, "How is this going to help anyone?"

Oddly, a number of the first essays were also about sex, and especially the male scientists' attraction to women. One remarked that he first became interested in science because he liked Mary Ann from Gilligan's Island, and the smart guy got her. Another talked about women turning tricks behind the convenience store he worked at, and how he became interested in thinking about how men strive for power in order to have sex and procreate. Another enjoyed confounding pretty girls in social science classes with jargon from the hard sciences, feeling like he was impressing and attracting her. There are other examples, but I was left thinking, "Clearly, they are writing about the male experience. This isn't going to help attract women into the field." Combined with all of the essays from scientists about how their parents were scientists and their grandparents, I couldn't help but think this entire book would only serve to show how the fields of science stagnate with the same type of person.

I almost quit reading, but I'm glad I stuck with it. The essays that appear later in the book are much better. These scientists discuss about how they enjoy experiences in the field, doing observational work instead of repetitive experiments. A lot talked about tinkering with computers, circuits, or LEGOs, or talked about persevering and writing to a number of schools and scientists they were were interested in. A number write about the enjoyment of looking for patterns, not only in nature, but also in the human experience (like language). One scientist shared his experience with his growing passion for physics and mathematics and the challenges he faced with his family pushing him to pursue premed courses in school instead. In short, the essays that appear later in the book are much better and are more likely to have a positive influence on the reader (unless the reader is male and born into a family of scientists. Then, I suppose, the earlier essays might be relevant).

I'm not sure how the editor chose to organize these essays, but I think this book would be improved if some of the essays that appear in the second half of the book are moved to the beginning.

There were essays that were interesting just because of the content they covered. I got a kick out of the essay written by a psychologist from Harvard, Steven Pinker, as he talked about how we tailor or memories so that they fit our personal narrative. When our narrative changes, we change our memories to fit. He ultimately dismissed all of the other scientists' essays because, he argued, they are only attributing any significance to these early experiences because they are looking for it.

Geetanjali says

A book of original essays by celebrated third culture thinkers - scientists who, through their work and writing, are taking the place of the traditional intellectual in rendering visible the deeper meanings of our lives, redefining who and what we are. The authors, all of whom are world-class scientists, are also well-known as authors of books for the general public. A very engaging book to read. The respective scientists justify, testify the reasons they chose to follow the path of science.

Marsmannix says

Parents: if you want to raise something other than a one-celled consumer of mass culture, READ THIS BOOK. your kid may have a chance.

Mark says

Readability 7. Rating 5. Sort of a "just so" collection of "how a child becomes a scientist" from the point of view of scientists looking back on their own lives. Interesting and quite varied, but devoid of analysis or synthesis. At least two of the scientists note that the exercise is meaningless - since people remember what they remember, not necessary what was, and explanations tend to reflect current culture rather than any objective reality. My only useful takeaway was that, despite the fact that this is a subset of scientists who are also popular writers, they had a wide variety of backgrounds and early life experiences, and came to science at very divergent points in their lives, from seemingly coming out of the womb with test tubes in hand to figuring it out in college or even later.

Lydia says

This is a book of personal anecdotes you will have a tendency to take as fact because there are oh so many Ph.D's slathering these insides. At least go read the Lee Smolin chapter.

William says

Alright book, although I became a jealous rage monster reading essays that ran something like 'Newton was my father, Einstein would come over for cocktails, we would go on holiday with Darwin and Huxley, I built my first telescope with Galileo and my first computer with Turing. Hawking would boss us kids about.'

There were a frightening number of essays like this (granted, there were others whose parents told them not to read so much, it was bad for their eyes, but these did not make me envious.) And the stories about going to University and having long intellectual discussions. When I tried this back in the day I was met with eyerolling and shushing, but this is probably because I'm an obnoxious git incapable of civilized conversation, which in my case would be pseudo-intellectual, anyway.

Eve says

I always like to hear how people got into doing what they do, and so this book appealed to me right off the bat. Well, ever notice that people with Ph.D. degrees tend to have relatives who also are highly successful? In the great majority of these essays by scientists, that is the case: Their parents were professors or scientists or diplomats or otherwise able to give them the opportunity to hang out in labs, bump into Einstein on campus, or otherwise explore the world with unlimited resources and social encouragement. (See Malcolm Gladwell's OUTLIERS.)

In reading CURIOUS MINDS, I found myself imagining myself in a lecture hall with these people, and ended up dozing off during many of their (often repetitious) accounts. However, there were others who enchanted me with tales of their almost accidental discovery of their life's passion—the son of a cowboy who became fascinated with brains while butchering livestock comes to mind—and those were the ones who kept me awake and wanting more of the same. Of course, some children of scientists also were very lively, but in the end those self-made scholars were the most interesting to me personally. Each was unique. To average them all out, keeping the significant dryness in mind: three stars.

Evelyn says

The first third of the essays didn't do anything for me, especially the very first since it seemed a litany of connections. Much more interesting were the ones by Freeman Dyson, Richard Dawkins, Janna Levin, &c. I wish to steep myself in more science writing, particularly Darwin.

Elizabeth says

I found it interesting that many of these scientists didn't have a burning desire to be scientists in their school years and entered university with no clear idea that they would become scientists. Some were inspired by great lecturers which led them into their chosen specialisation while others didn't have great experiences in subjects that they intended on progressing in or with lecturers which diverted them from one area of science to another. Personality and style of teachers, peers and chance meetings of mentors led many of these people down unexpected but very interesting paths.

Lisa says

Overall I found this collection to be very frustrating. As others have noted, the "answer" to "how a child becomes a scientist" from this book seems to be "have parents who are scientists." Additionally, out of the 27

essays, only 6 seem to be written by women, and underrepresented minorities are definitely underrepresented here. Many of the essays included objectification of women (often citing the idea of "getting girls" to be a motivator to become a famous scientist), although I will note that Lynn Margulis also called herself "boy crazy," so maybe some of this is just scientists recounting their growth, including puberty.

Having said that, a few of the essays were really well written and thought provoking, and the contributors are big names. I'd recommend picking out a few of interest if you happen upon this book; my favorite was probably VS Ramachandran.

Cynthia says

This collection isn't really about how a child becomes a scientist exactly, it's a collection of short autobiographical stories about how some of the scientists in it discovered or grew up with a appreciation for science.

Some of them are great, off the top of my head, Daniel Dennett's story about his very unusual childhood abroad and his early humanities background before he went into science was very humourously told.

The rest in this collection are a little spotty, so read the best ones and skip the rest.

Shannon says

I really enjoyed this anthology, which consisted largely of psychologists and physicists. I picked this up because I knew Steven Pinker and Richard Dawkins contributed essays. So how does a child become a scientist? Sleepovers with Stephen Hawking and living next to Einstein are certainly helpful. Dating Carl Sagan is also advantageous. Moreover, many of the scientists in this collection are children of scientists. I did see a pattern of parental involvement in encouraging creative and critical thinking. Children are naturally inquisitive, and adults should foster their curiosity. This was a very interesting read that I highly recommend. Female scientists were well represented. Excellent book.

Miriam says

As with any group of essays, some were stronger than others. I enjoyed hearing from a diverse group of scientists. Even though they followed different paths into science, there are some similarities between their stories that were very interesting.

Danny says

After reading this volume, I'm still not certain how exactly a child becomes a scientist. But I'm certain reading the book was worth the effort. It was a pleasure to read. There is one common theme in each short essay that is worth mentioning: these scientists were not only incredibly curious and had encouraging parents, they were all voracious readers. Books were a significant part of all the contributors. They read

books about biology, mathematics, physics, cosmology, archeology, neurology, and other important fields. And they also read fiction, poetry, philosophy, and dramatic works. Again, I'm not certain this is THE formula that creates a scientist. To me, it just sounds like a wonderful way to spend one's time.