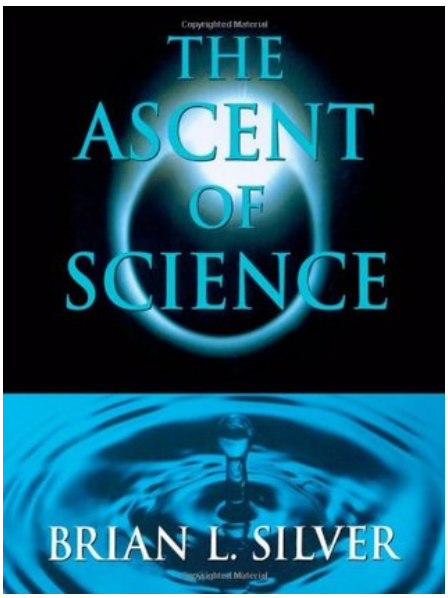

The Ascent of Science

Brian L. Silver

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From the revolutionary discoveries of Galileo and Newton to the mind-bending theories of Einstein and Heisenberg, from plate tectonics to particle physics, from the origin of life to universal entropy, and from biology to cosmology, here is a sweeping, readable, and dynamic account of the whole of Western science.

In the approachable manner and method of Stephen Jay Gould and Carl Sagan, the late Brian L. Silver translates our most important, and often most obscure, scientific developments into a vernacular that is not only accessible and illuminating but also enjoyable. Silver makes his comprehensive case with much clarity and insight; his book aptly locates science as the apex of human reason, and reason as our best path to the truth. For all readers curious about--or else perhaps intimidated by--what Silver calls "the scientific campaign up to now" in his Preface, *The Ascent of Science* will be fresh, vivid, and fascinating reading.

The Ascent of Science Details

Date	:	Published April 6th 2000 by Oxford University Press, USA (first published November 30th 1990)
ISBN	:	9780195134278
Author	:	Brian L. Silver
Format	:	Paperback
Genre	:	Science, History, Nonfiction

From Reader Review The Ascent of Science for online ebook

Peter Macinnis says

A most excellent and erudite stroll through science.

Simon Mcleish says

Originally published on my blog here in September 2002.

In the same way that new translations of classic works of literature need to appear for each generation to understand their relevance to them in particular, so too it is necessary for a new explanation of science for the general reader to be published every few years. The title of Brian L. Silver's book clearly invites comparison with Jakob Bronowski's The Ascent of Man, and the equivalent in my teenage years was Isaac Asimov's Asimov's Guide to Science. The reasons why new books are needed are pretty obvious: as scientific and technological research proceed, the issues of interest to "the man in the street" or what science has to say about them will also change; twenty years ago many current controversies such as genetic modification of crops were futuristic science fiction.

Much of the ground covered is of course the same, but the good writer on basic science will stamp their personality on the material; they will make the story of scientific discovery their own. The particular slant an author takes is obviously going to be dependent on their ideas about science and its practitioners. Bronowski was interested in scientific progress, so The Ascent of Man turned out to be an integrated narrative. Isaac Asimov was interested in the all pervasiveness of science in the modern world, so that his book was a comprehensive general reference book.

The Ascent of Science is not as comprehensive as Asimov's book (which contains details on such things as the measurement of air pressure) and not as development oriented as Bronowski's (it is not, for instance, organised chronologically). What, then, are his concerns? In the last decades of the twentieth century, criticism of science (which includes both the well-informed and the mindless) has become increasingly vociferous, mainly as a result of debate about environmental issues. Silver is interested in this, and presents a lot more of the arguments there have been about scientific theories through history, rather than presenting currently supported ideas as gospel or acknowledging critics only be briefly ridiculing creationism as is done in many books for the general reader (for whom Silver appropriates the phrase "l'homme moyen sensuel"). He generally defends current scientific orthodoxy, while retaining some sympathy with those who attack science. (The penultimate chapter, "What the devil does it all mean?" includes some cogent criticisms of scientists, particularly those who take an overly grandiose view of their own work; he singles out certain enthusiasts for the Superconducting Supercollider and the Human Genome Project.) Above all, he wants to promote reasoned debate, and one of the major purposes of The Ascent of Science is to make it possible for a non-professional to take an informed part in such a discussion. This makes The Ascent of Science more concerned with the philosophy behind scientific thought than most books at this level, yet Silver's writing is always accessible. The well chosen bibliography would provide an excellent springboard for anyone wanting to learn more about the details of some aspect of science covered here.

The Ascent of Science is clear and well written, surely destined to become something of a classic of this genre. It is a real pity that Silver will never be able to update it (he died between completion and publication

of the book). It has much to offer even those who know more about science, containing details and viewpoints which were new to me; accounts of the controversies of the past are particularly fascinating.

Denae says

This book helped rectify the fact that I was raised in an environment where most science is avoided, if not directly refuted. An excellent overview that does what it claims in the title; covers the full ascent of science.

Mattias Martens says

Very nice comprehensive survey with lots of interesting information. The treatment of chaos theory is especially engaging.

WarpDrive says

Very nice overview of all major scientific subjects, from relativity to quantum mechanics, from to molecular biology to statistical mechanics applied to thermodynamics, to cosmology etc.
Thoroughly enjoyable read, accessible to virtually everyone, as it has very minimal mathematics; also, potentially complex concepts are beautifully expressed in a very lucid and consistent manner.
The author demonstrates a versatile and deep intelligence and culture, and his forays into the realm of philosophy of science are a great pleasure and intellectually stimulating.
The only minor issues in this book are: the part on cosmology is (necessarily, as the book was published in the late 90's) a bit dated; the treatment of the concept of entropy and of quantum mechanics is a bit too superficial, and important concepts of symmetry and symmetry breaking are not treated at a sufficient level of detail. There are also a few typos. And I personally disagree with some of the views expressed by the author.
But, apart form these minor issues, I am very happy with the time I invested in reading this book: it is a complete intellectual pleasure and highly recommended to everybody who is interested in the scientific endeavour.

Lightdee says

amazing facts in every chapter: do you know how fast an air molecule travels? how we know what atoms make up a molecule? why sunlight causes skin cancer? that dirt is largely oxygen atoms by weight? that 5 or 6 atoms are in most of the molecules in your body? Silver explains these things in an easy manner, and makes it interesting as well.

Jay Brand says

It's a wonderfully balanced treatment of the important milestones in the history of science along with their important implications--although it focuses more on the so-called "physical" and "natural" sciences than on the "social" and "behavioral" sciences. Surprisingly well-written for a tome on science (it's just over 500 pp.), I found it charming and delightful--but I may be biased--as a scientist myself. I would quibble with only one point--I feel that the author does little to counter the (in my view) erroneous historical distinction between science and religious faith--particularly the Judeo-Christian tradition based on a belief in the Bible. I believe that faith and science can be compatible--if our faith derives from the authority of the Bible rather than the church.

Daisy2 says

This is a very good book. It ties in philosophy and a little art with science. Tells the story of scientific break throughs.
Poo Poos the Higgs Boson as the "God Particle". Stating that it will be an important achievement but not ground breaking. Thus the "God Particle" is just a marketing term used by over zealous particle physicists

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Suzy says

You know how every science book boasts joyously that it is "accessible"? And then fries your brain into foul smelling grey pancakes ten words in? Well, the boast is truth in this case. Accessible, but not easy. Fascinating, but not facetious. The heart of this book is a journey into science, and Silver is both a trustworthy guide and reassuring companion.

Unfortunately, most of the facts and formulae have already escaped my mind. But this book left me with a lingering sense of wonder and oddly enough, gratitude.

Don says

Quite simply one of the most interesting books I've ever ready. Topic after topic were utterly compelling to me. The section on the molecular structure of cells made me pause and for the first time truly ponder the design of life. That was a moment of deep change in my heart.
