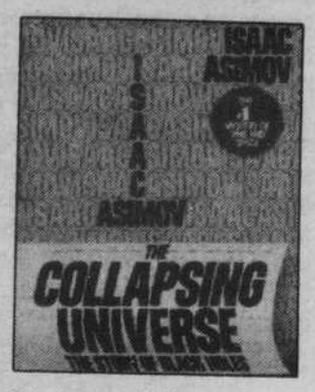
Science can be readable; culture adds sneaker chic

By BOB WEBB
The Collapsing Universe, The Story of Black Holes
By JERRIL NILSON
The Super Sneaker Book



By Dr. Isaac Asimov
©1977, Pocket Books
248 pages, $1.95 paperback

How do tides work?

What is the Sun made of and how does it continue to give off heat?

What is a red shift?

What is a planetary nebula? A nova? A supernova?

What is a pulsar, red giant, white dwarf, neutron star and how are they formed?

How can the pull of a celestial object be so strong as to not even allow light to escape its clutches?

Just what is a collapsar, or "black hole?"

The answers to these and literally hundreds of other questions concerning the fields of chemistry, physics and astronomy, as well as "what's out there," can be found in Dr. Isaac Asimov's book *The Collapsing Universe, The Story of Black Holes.*

Those of us who could never remember the table of elements and who would walk out of basic algebra classes with headaches need not be put off by apprehensions about not being able to read or understand this book. Rest assured, Asimov wrote it with the layman always in mind.

Exo-biologist and astronomer Carl Sagan has called Asimov "A Renaissance man born out of his time, . . . the greatest explainer of the age." And indeed, one look at the science fact books Asimov has written will reveal this appellation to be a just one. His works of non-fiction are written in a familiar, easy style, but with their scientific integrities intact. Asimov is first and foremost a writer; he just happens to also have a Ph.D. in Bio-Chemistry.

In *The Collapsing Universe,* Asimov begins with a bottom line discussion of the four basic interactions, or forces — nuclear, electromagnetic, weak and gravitational — that hold everything together. He explains, on the atomic level, the conditions necessary for each force to work and how they do so. He then, step by step in a well-organized and clear cut fashion, takes us through the hows and whys of planet and star formations; how they/we got there and what keeps us here.

He continues by explaining the main sequence of a star's life, and the possible variations on that sequence, including pulsars, neutron stars and the possibility of black holes.

Almost three-fourths of the book is used for background, before we even get to the discussion of black holes. This may seem to be an inordinate amount since the book is supposed to be the story of black holes. But that much background is necessary if one is to understand the theory of black holes. (I say theory because not a single black hole has conclusively been found; certain distinct possibilities exist but, as Asimov states, " . . . almost anything some astronomers suggest about a black hole is denied by other astronomers. We are here at the very edge of knowledge, and everything, one way or the other, is very uncertain and iffy."

But among those uncertainties we can find an enormous amount of mind-expanding speculations. This is what the last part of the book concerns. Asimov has given us the fundamentals and now revels in the realm of the scientific mind at play.

Discussed are the possibilities of discoveries which could completely destroy the theory of black holes, mini-black holes (did one strike the Siberian tundra in 1908?), the Einstein-Rosen bridge, or, more colorfully, wormholes (tunnels through space and possibly time which may be entered via a black hole; "If the mass passes through the wormhole and suddenly appears a billion light-years away in ordinary space once more, something must balance that great transfer in distance" perhaps, "this impossibly rapid passage through space is balanced by a compensating passage through time, so that it appears one billion years ago."), quasars (possibly "giant white holes at the other end of a wormhole from a giant black hole), the Cosmic Egg, big bang theory, expansion and/or contraction of the universe, and even the possibility that the entire universe itself, as we know it, is one big black hole. "There are no answers . . . at present. All is speculation . . ."

Included, as well, are Appendices briefly and simply explaining how exponential numbers are read (would that I had had this book in high school math courses!), how the metric system works and a comparison of the Fahrenheit and Celsius temperature scales.

Asimov's method of passing on knowledge also offers an interesting by-product. Occasionally, when discussions of the universe or even our own solar system crop up, people

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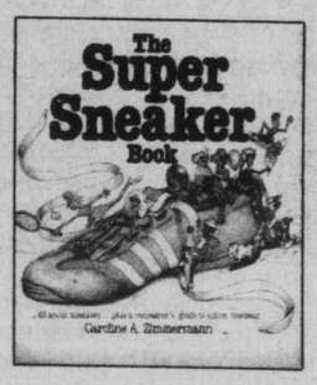

By Caroline A. Zimmermann
©1978, Dolphin Books
184 pages, $5.95 paperback

Popular culture — TV, comics, heroes, fads — I grew up with it. Philosophy — I avoided it. Give me a book that will *not* make me ponder the Universe, but one that will Entertain me!

The Super Sneaker Book is Popular Culture recorded and is thoroughly frivolous and entertaining. After a term of Descartes, Plato and Buddhism, this book will keep you in shoelaces.

Caroline Zimmermann is president of her New York City direct-marketing advertising agency. Whatever prompted her to author this work, only she knows. But she does document a $500 million market dear to even Eugene — the boom in running shoes:

"Once the 'national shoe' of children, the sneaker is now seen everywhere and on everyone. From the fabled 'little old lady in tennis shoes' to the marathon runners . . ., the trend is toward variety, comfort and style in footwear. Everyone is either an athlete, or dressing like one, and sneaker chic is the height of fashion."

Zimmermann relates the history of sneakers, from word origin (sneaker-sneak-thief) to reasons for wearing (protection, ornamentation, comfort) to eras of popularity (the Rock Revolution, the Sports Revolution, the Leisure Revolution).

The invention of rubber, of course crucial to sneaker development, begins with some crazy native chasing a wild boar and ends with Charles Goodyear's not-so-accidental discovery of Vulcanized rubber.

Nineteen ACTION-PACKED sports photos of famous sport-types and their equally famous sneakers precedes the tale of the Dassler Brothers, Adolph and Rudolph, the eventual individual owners of Adidas and Pumas (respectively) and their constant rivalry.

As sneakers are now "in," fashion theorists believe that "going out should not have to be a pain in the arch." Thus Zimmermann provides some tips on sneaker choice, care and (at the end of the book) a handy consumer comparison of running, tennis and other sport shoes.

Science, too, has been caught up in the act with Gideon Ariel's computerized biomechanical design. As even cars become individually customized to the owner's needs, the sneaker of the future will be designed to best assist your feet by analyzing your everyday movements.

But wait, you say. We thought this was as an entertaining book? Fear no more. Zimmermann's "The Sneaker People" is the definitive statement of who wears what sneaker: "After reading this section, you'll know precisely which sneaker 'look' to buy, simply by figuring out which sneaker person is closest to your personality."

There are 17 looks (excellent drawings, also) at everyday folks from Baby to Senior Joggers all hilarious, ridiculous, poignant. The Teeny Bopper exists in a phase of sneaker wearing where everyone, down to their sneakers, looks the same. "To be a Teeny Bopper," Zimmermann says, "is to hibernate for four years, after which you wake up, see college ahead of you, and go back to sleep."

The Earth Mother wears hand-made sneakers and does an occasional margarine commercial, while the Pro Jock "rarely does anything unless he gets paid for it."

Are you a Chic Jogger? Then jogging with your husband is not very acceptable (having a husband is not acceptable at all). Jog with your dog — but only sheepdogs: they're in vogue.

Closer to home, perhaps, The Collegiate, wearing of course one of his two pairs of white Adidas, has only two goals during his four year college existence, neither of which has anything to do with graduation: One — meet a girl with whom he can have an intensely satisfying physical relationship, two — be mellow.

"There are no one-night stands (except for those indiscretions which occur off-campus) for the Collegiate; he must achieve a mental compatibility with a campus woman before going on a physical level (under the right circumstances, however, mental compatibility can be reached in about the amount of time it takes to remove one's clothing)."

Continuing with the fun, Zimmermann points out some not-so-noticeable famous movie scenes in which sneakers are worn: Who remembers Dustin Hoffman (the one in the sneakers) whisking away Katharine Ross in *The Graduate?* And how about George Burns playing God in *Oh, God.* He wore tennis shoes to prove he was just an ordinary guy.

But you, too, can be an ordinary guy, or even look like a movie star these days with designer sneakers and clothes to match. But with such a wide variety, you may feel still confused. Zimmermann offers advice from Dear Aunt Sneaker, as well as The Super Sneaker Spotter's Guide, or how to tell Keds from Tretorns by their stripes.

And there you have it — 184 pages of fun and fact that combine to present another part of today's culture and our preoccupation with dress. Though unlikely to make the Times best-seller list, it still deserves recognition as a worthwhile purchase for someone you know who likes to laugh.