

QED: The Strange Theory of Light and Matter

Parts 1-30 <http://www.youtube.com/playlist?list=PL5DB4C82BDD7375E4>

Lecture 1 <http://video.google.com/videoplay?docid=1501838765715417418>

Lecture 2 <http://video.google.com/videoplay?docid=-5604842186235091737>

Lecture 3 <http://video.google.com/videoplay?docid=-2622437302869951111>

(1) <http://www.cosmolearning.com/video-lectures/photons-corpuscles-of-light-part-i-12151/>

(2) <http://www.cosmolearning.com/video-lectures/fits-of-reflection-and-transmission-quantum-behaviour-part-ii-12160/>

Lecture 1 <http://www.youtube.com/watch?v=xdZMXWmlp9g>

http://en.wikipedia.org/wiki/Lucasian_Professor_of_Mathematics

[http://en.wikipedia.org/wiki/George_Dyson_\(science_historian\)](http://en.wikipedia.org/wiki/George_Dyson_(science_historian))
http://en.wikipedia.org/wiki/Freeman_Dyson
[http://en.wikipedia.org/wiki/George_Dyson_\(composer\)](http://en.wikipedia.org/wiki/George_Dyson_(composer))
<http://www.youtube.com/watch?v=mF3TPceozys>
http://www.cardiffmetropolitancathedralchoir.macwebsitebuilder.com/f/08_Dyson_-Magnificat_in_F.mp3

TED

http://www.ted.com/talks/freeman_dyson_says_let_s_look_for_life_in_the_outer_solar_system.html
http://www.ted.com/talks/george_dyson_on_project_orion.html
http://www.ted.com/talks/george_dyson_at_the_birth_of_the_computer.html
http://www.ted.com/speakers/FREEMAN_dyson.html
http://www.ted.com/speakers/george_dyson.html

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<http://www.amazon.com/George-B.-Dyson/e/B000AQ4LKE>
<http://www.amazon.com/Freeman-Dyson/e/B000APXXEU>

<http://www.amazon.com/Turings-Cathedral-Origins-Digital-Universe/dp/0375422773>

<http://ocw.mit.edu/high-school/courses/highlights-of-calculus/highlights-of-calculus-5-videos/big-picture-of-calculus/>

http://en.wikipedia.org/wiki/David_Berlinski
<http://www.discovery.org/scripts/viewDB/index.php?command=submitSearchQuery&query=David%20Berlinski&orderBy=date&orderDir=DESC&searchBy=author&searchType=all>

What's the overlooked gem, the book I haven't read that I must?

Every reader has at least one, that book that never caught on, or is out of print, but that resonates so much with people that they can't forget it. I still remember reading "The Republic of Tea" on the Sunday it came out years ago. And of course, Steve Pressfield's "The War of Art" which I've purchased and handed out a dozen times so far...

http://www.ted.com/conversations/26/what_s_the_overlooked_gem_the.html

<http://www.discovery.org/a/2444> Godel and Einstein

The Calculus Diaries: How Math Can Help You Lose Weight, Win in Vegas, and Survive a Zombie Apocalypse
1st Edition. (August 31, 2010) | ISBN: 0143117378 | 336 pages | EPUB | 2 mb

Kiss My Math meets A Tour of the Calculus Jennifer Ouellette never took math in college, mostly because she-like most people-assumed that she wouldn't need it in real life. But then the English-major-turned-award-winning-science-writer had a change of heart and decided to revisit the equations and formulas that had haunted her for years. The Calculus Diaries is the fun and fascinating account of her year spent confronting her math phobia head on. With wit and verve, Ouellette shows how she learned to apply calculus to everything from gas mileage to dieting, from the rides at Disneyland to shooting craps in Vegas-proving that even the mathematically challenged can learn the fundamentals of the universal language.

Review: The starship and the canoe

Editorial Review - Kirkus Reviews

Freeman Dyson is a celebrated theoretical physicist whose dream of cruising the galaxies became the Orion project; George Dyson is his dropout son who lives in a British Columbian treehouse and cruises the Inside Passage in handmade canoes and kayaks. Brewer introduces father and son, rare constellations of eccentricity and talent, in this elegant, zingy expedition. The space cadet wants to colonize asteroids and looks for H₂O out there; the boat builder and rain-forest resident looks for dry havens and champions epoxy. Freeman's friends design nuclear reactors on their vacations; George knows a woman who eats only crows and potatoes, a man who lives in a hammock, and a poet who writes in pre-Babylonian tongues. Freeman's model starship, a joint venture with Ted Taylor and similar brains, successfully exploded its nuclear bomb propellants without ever leaving the ground; George's first boat, improving on the Nunivak Eskimo classic with modern materials, was tippy. Freeman's "hot-rod" model lifted off to scientific acclaim; George's second boat nearly flew, and his next, "the Queen Mary of kayaks," became a local totem. Brewer clearly enjoys his crafty counterpoint, appreciative of the father but more sympathetic to the son, noting the foibles and impassable barriers--they were estranged for several years--as he grapples with celestial mechanics over hamburgers, shinnies up George's tree for sunflower seeds, and witnesses a tentatively cordial reunion. Freeman is a man offered jobs with stock options: "Apparently a brain like Freeman's meant a whole franchise; it was like signing O. J. Simpson or Abdul-Jabbar." George as a child cut short a camping trip because his companion was a compulsive marshmallow eater. But it is the son who acts when two loggers capsize--reenacting, in an instant, the father's dream from 20 years before. In the tradition of Carl Sagan and John McPhee, a bracing cerebral voyage past intergalactic hoopla and backwoods retreats.

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The New York Review of Books

Dreamer

OCTOBER 11, 1979

Stephen Jay Gould

Disturbing the Universe

by Freeman Dyson

Harper & Row, 283 pp., \$12.95

A recent cartoon shows two aged scientists sharing a pipe in the smug satisfaction of a life well lived. “One thing I’ll say for us,” exclaims the first, “we never stooped to popularizing science.” I don’t deny that I have known such men, but their number is far smaller than is commonly thought. Most scientists do wish to transmit their information and their excitement to nonprofessionals. If few actually write or speak for the public, their reticence arises more from shyness and inexperience than from lack of concern.

The great works of popular science are lucid expositions of difficult subjects in nontechnical language—Bertrand Russell’s *The ABC of Relativity*, or George Gamow’s series about the adventures of Mr. Tomkins in a world where the physics of relativity and quanta rule over objects at human scale. These works clarify the content of science, but they do not make the process of scientific knowledge any less mysterious. Science might, after all, produce clear messages by using arcane procedures accessible only to an initiated priesthood. To break down this final barrier between science and its public, scientists must present themselves as well as their work. And here, at the threshold of autobiography, most scientists balk. They may produce *in camera* works full of unconscious distortion (as Darwin did in writing, for his children, an autobiographical note never intended for popular consumption). Or they may discourse in wooden, unrevealing words about their fascinating lives (L.S.B. Leakey’s *By the Evidence*, for example), or write only to vindicate their positions in a lifetime of petty squabbles. Usually, of course, they write nothing, repeating the mute response of Jesus to Pilate’s question, “What is truth?” rather than Pilate’s statement upon displaying Jesus after

torture—*ecce homo*, behold the man. Yet science, as an activity, will remain inaccessible as long as scientists refuse to speak honestly about their own lives and dreams.

Freeman Dyson has broken a path by showing that writing a candid autobiography can be fun, or at least cathartic. *Disturbing the Universe* provides a fine beginning to an admirable series planned by Harper & Row and the Alfred P. Sloan Foundation. At least nine scientists (P.B. Medawar is next, I am happy to report) will write eclectic documents mixing autobiography with a free-wheeling discussion of ideas. “The objective of this program,” the prospectus states, “is to convey to the educated lay reader a sense of the meaning of science and other forms of rational endeavor in the human and cultural contexts of which they are a part.”

Dyson, distinguished physicist and professor at the Institute for Advanced Study in Princeton, New Jersey, has carried out in his life the motto he has chosen for our potential salvation—diversity. He has divided his scientific time between theoretical physics and practical (or impractical) applications. He has tried to design safe nuclear reactors, championed an indefensible scheme to propel spacecraft with atomic explosions (literally bombs with all their attendant ...

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"One thing I'll say for us, Meyer—we never stooped to popularizing science."

"For the good of all of us, we need scientists to use clarity and precision when they explain their work, but we also need to understand their words," Alan Alda, USA Today, 03/01/12

Other books in this series are:

Disturbing the Universe by Freeman Dyson

Advice to a Young Scientist by Peter Medawar

The Youngest Science by Lewis Thomas

Haphazard Reality by Hendrik B. Casimir

In Search of Mind by Jerome Bruner

A Slot Machine, a Broken Test Tube by S. E. Luria

Enigmas of Chance by Mark Kac

Rabi: Scientist and Citizen by John Ragden

Alvarez: Adventures of a Physicist by Luis W. Alvarez

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In Praise of Imperfection by Rita Levi-Montalcini

Memoirs of an Unregulated Economist by George J. Stigler

What Mad Pursuit by Francis Crick

Astronomer by Chance by Bernard Lovell

The Joy of Insight by Victor Weisskopf

Models of My Life by Herbert A. Simon