

Why Am I Doing This?

by

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Once upon a time I wrote a book to go with Physics 340, a course for Arts students at the University of British Columbia. After several experiments with existing textbooks, I decided to start my own, based on the usual collection of handwritten lecture notes. My reasons did not include any conviction that I could do a better job than anyone else; rather that I hadn't found any text that set out to do quite the same thing that I wanted to do, and I was too stubborn to revise my intentions to fit the literature. I have gotten worse with age.

What *do* I want to do? The impossible. Namely, to take you on a whirlwind tour of Physics from classical mechanics through modern elementary particle physics, without any patronizing appeals to faith in the experts. I especially want to avoid any hint of phrases like, "scientific tests prove..." that are employed with such poisonous efficiency by media manipulators. I want to treat you like a savvy graduate student auditing a course outside your specialty, not like a woodenheaded ignoramus who has no intellect to appeal to. In particular, I believe that smart Arts people are as smart as (maybe smarter than!) smart Science people, and a good deal more eclectic on average. So I will be addressing you as if you were in the Humanities, though you may just as well be a Nobel laureate chemist or a short-order cook at a fast food restaurant. What do I care what you do for a living? I do want you to see Physics the way I see it, not some edited-for-television version. A tall order? You bet. I'm asking a lot? That's what I'm here for.

Another point I ought to make clear immediately is that this is not a presentation "for people who hate math." That would be like teaching a Mathematics course "for people who hate words." Anyone who hates a tool is suffering from a neurosis; it may be sensible to hate one or more of the ways the tool is *used*, but the tool itself is just a thing. I do propose to craft this resource "for people who hate boredom."

My idol, Richard Feynman, is reputed to have said, "Science is the belief in the ignorance of experts." I love that phrase. It sums up the bare essence of the intellectual arrogance, the willingness to believe in one's own reasoning regardless of what "experts" say, that makes original science (and art) possible. In my opinion, it also makes democracy and justice possible; consider Stanley Milgram's famous research on obedience... But I digress. It is also true that, while experts may be ignorant, they are rarely stupid; and that a person who wants to trust his or her own judgement above that of any authority has some obligation to hone said judgement to a razor edge. With arrogance comes responsibility. So I am not just setting out to encourage people to disregard or denigrate experts; merely to recognize their *ignorance* and to realize that we all have so much more ignorance than knowledge that in that regard we are almost perfect equals.